

**ASSISTANCE TO DEVELOP AND TEST STRATEGIES
TO EXPAND THE FAMILY PLANNING PROJECT
USAID/G-CAP COOPERATIVE AGREEMENT
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LIST OF ACRONYMS

ACODIMAM	<i>Asociación Comunitaria de Desarrollo Integral Mam</i> (Mam Community Association for Integrated Development)
ARI	Accute respiratory infection
AGES	<i>Asociación Guatemalteca para Educación en Salud</i> (Guatemalan Association for Health Education)
AGROSALUD	<i>Patronato para el Mejoramiento de la Salud del Trabajador Agrícola y su Familia</i> (Insitution for Improvements in Health for Agricultural Workers and their Families)
APROFAM	<i>Asociación Pro-bienestar de la Familia de Guatemala</i> (Society for Family Welfare in Guatemala; IPPF affiliate)
APROVIME	<i>Asociación Preventiva para la Salud de la Mujer Vivamos</i> (Preventive Association for Women's Health)
ASECSA	<i>Asociación de Servicios Comunitarios de Salud</i> (Association of Community Health Services)
BB	Belejeb Batz (local Guatemalan NGO)
CA	Cooperative Agreement
CAFE	<i>Capacitación de Capacitadores y Facilitadores</i> (Training of trainers and facilitators)
CBD	Community-based distribution
CDRO	<i>Cooperación para Desarrollo Rural de Occidente</i> (Cooperation for Western Rural Development)
CEIPA	<i>Centro Ecuménico de Integración Pastoral de Guatemala</i> (Ecumenical Center for Pastoral Integration of Guatemala)
CHW	Community health workers

CONAIS	<i>Consejo Nacional Indígena Salvadoreño</i> (National Indigenous Salvadorian Council)
CTR	Center for Telecommunications Research
DL	Distance learning
DMPA	Depomedroxi Progesterona Acetate
EC	Emergency contraception
EPS	Rural Supervised Professional Exercise Program
FEMAP	Federación Mexicana de Asociaciones de Planificación Familiar
FESIRGUA	<i>Federación de Organizaciones en Salud Infantil y Salud Reproductiva de Guatemala</i> (Federation of Child and Reproductive Health Organizations of Guatemala)
FP	Family planning
FSS	Financial self-sustainability
HIV/AIDS	Human immunodeficiency virus / Acquired immunodeficiency syndrome
IDEI	<i>Instituto de Educación Integral para la Salud y el Desarrollo</i> (Institute for Integral Health and Development Education)
IEC	Information, education and communication
IGSS	<i>Instituto Guatemalteco de Seguridad Social</i> (Guatemalan Social Security Institute)
IPPF	International Planned Parenthood Federation
IUD	Intra-uterine device
IMCI / IMCI-C	Integrated Management of Childhood Illness / Community-level IMCI

INSARE	<i>Intervenciones de Salud Reproductiva</i> (Reproductive Health Interventions; CARE Guatemala project)
I PROFASA	<i>Importadora de Productos Farmacéuticos, S.A.</i> (Organization for Pharmaceutical Products Importation)
JICA	Japanese International Cooperating Agency
JSI	John Snow International
LAM	Lactational amenorrhea method
LAPROMED	<i>Laboratorio de Productos Medicinales</i> (Medical Products Laboratory)
LLLG	<i>La Leche League</i> of Guatemala
MCH	Maternal and child health
MEXFAM	<i>Fundación Mexicana para la Planificación Familiar</i> (Mexican Foundation for Family Planning; IPPF affiliate)
MFP	Mayan Fellows Program
MSPAS	<i>Ministerio de Salud Pública y Asistencia Social</i> (Ministry of Public Health and Social Assistance)
MOH	Ministry of Health
NA	Needs assessment
NFP	Natural family planning
NGO	Non-governmental organization
OR	Operations research
PAC	Post-abortion care
PAHO	Pan American Health Organization
PC	Population Council
PCI	Project Concern International

PIES de Occidente	<i>Asociación para la Promoción Investigación y Educación en Salud del Altiplano Occidental de Guatemala</i> (Association for the Promotion of Research and Health Education in the Western Highlands of Guatemala)
POE	Post-obstetric event
PROAM	<i>Programa de Accesibilidad a los Medicamentos</i> (Drug Accessibility Program)
PVS	<i>Promotores voluntarias de salud</i> (Volunteer health promoters)
R/CH	Reproductive / Child health
RDP	Rural Development Program
RH	Reproductive health
SHARE	<i>Auto-ayuda y Recursos Intercambio</i> (Self-help and Exchange Resources)
SIAL	<i>Sistema Integrado de Administración y Logística</i> (Integrated Logistics and Administration System)
SIGNA	<i>Sistema Geográfico Nacional</i> (National Geographic System)
STI	Sexually transmitted infection
TA	Technical assistance
TBA	Traditional birth attendant
TNA	Training needs assessment
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

USC

University of San Carlos

WHO

World Health Organization

ASSISTANCE TO DEVELOP AND TEST STRATEGIES TO EXPAND THE FAMILY PLANNING PROJECT

I. EXECUTIVE SUMMARY

In 1994, the Population Council signed a Cooperative Agreement (CA) with the United States Agency for International Development in Guatemala (USAID/G-CAP) to conduct operations research towards identifying strategies for the delivery of cost-effective reproductive health services to rural Mayan and poor segments of the Guatemalan population. This CA, which had a total duration of seven years (1994-2001), included two complementary components referred to as Element I (Operations Research) and Element II (NGO Strengthening). The primarily operations research (OR) activities initiated under the CA in the fall of 1994 included: dissemination and institutionalization of previous OR findings, promotion of inter-institutional collaboration, training of Mayan professionals, and creating mechanisms and support for the integration of Mayan personnel into the field of reproductive health. These activities within Element I, some of which were conducted in collaboration with INOPAL III during the initial years of the CA, were carried out until 2001.

Element II, also referred to as the NGO Strengthening Project, was initiated in 1996 with the redefinition of the USAID/G-CAP strategic plan. During this year, the CA was extended twice – eventually to the end of 1999 – in order to continue OR activities. A second component, aimed at strengthening local Mayan NGOs and their maternal and child health programs, was then added to facilitate the institutionalization of lessons learned in the first phase of the CA. Element II involved a variety of technical assistance and capacity building activities which aimed to test whether indigenous NGOs working in the Mayan highlands could be technically strengthened to provide accessible, acceptable and quality reproductive and child health (R/CH) services to their target populations, and whether these NGOs could be strengthened managerially to ensure the sustainability of their programs. Hence, the NGO Strengthening Project was designed to introduce and expand R/CH services based on OR results, and at the same time, to provide new operational challenges and stimulate research questions for further studies. In 1999, a third extension was granted by USAID to the Population Council, enabling them and their partner NGOs to continue with both Elements I and II until December 2001. Finally, a fourth and final extension was granted until February of 2002 to allow appropriate time for the conclusion of both OR and NGO Strengthening Project activities under the CA.

This report summarizes the activities and accomplishments of the Population Council's seven-year project in Guatemala (1994 - 2001). It is divided into two sections, examining separately the various components and achievements of Element I and Element II. Common sections then outline specific cross-cutting programs and activities carried out under the CA, including the Mayan Fellows Program and the Technical Working Group.

Element I: Operations Research

The 35 OR studies conducted under the CA had a three-fold purpose. First, studies aimed to develop and test innovative solutions to: (a) increase the access, use and quality of reproductive health services in Guatemala, (b) help improve the management of reproductive health programs,

and (c) increase the commitment of the Guatemalan government to provide comprehensive reproductive health care for women. Second, operations research strove to expand the use and institutionalization of OR findings as well as to change policies that prevent such actions. Third, studies were carried out with the aim of building technical capacity among local institutions and organizations to continue conducting operations research and utilizing OR results, with the ultimate goal of improving service quality and access.

With these objectives, operations research encompassed 1) diagnostic and technical assistance projects, 2) intervention projects and dissemination, and 3) institutionalization and utilization projects. These studies were carried out in collaboration with a variety of institutions both in the public and private sector, particularly the Guatemalan Ministry of Health (MOH), APROFAM (the local IPPF affiliate) and various local and international NGOs as well as academic institutions. Substantive areas of OR studies included: service access, information provision and health education strategies, constellation of services and contraceptive choice, technical competence strengthening, and postpartum/post-abortion services. Short-term technical assistance projects, initiated in 1997, were also carried out with a wide variety of education and health institutions on topics such as training of trainers, implementation of a job aid known as the Algorithm for Systematic Service Delivery, maternal and infant mortality analysis, contraceptive technology, logistics and management training, and fundraising.

Operations research and related technical assistance projects conducted by the PC proved to be highly successful in a number of areas. Perhaps most importantly, OR helped to strengthen the management and technical capabilities of indigenous NGOs and their health services for women and children. The PC worked to successfully expand and improve the NGO community's ability to provide clinical health services, notably adding family planning to their range of services, including Norplant® and injectable contraceptives such as Depo Provera®. A major achievement in this area was the increase in the use of natural family planning among the target population, particularly the necklace method.

During the CA period, the PC also trained over 1,500 MOH personnel in family planning and integrated maternal and child (MCH) services. Close ties were established in the course of these trainings with district and area-level MOH personnel throughout the Guatemalan highlands. A follow-up evaluation demonstrated that the personnel trained in integrated services continued to put into practice what they had learned a year and a half after the training, thus representing an important achievement in ensuring the continued application of skills after training. In addition, the Algorithm for Systematic Service Delivery was a highly successful strategy later adopted by the MOH within its national plans.

In conclusion, evidence from Population Council OR activities in Guatemala indicates that, while there is certainly room for improvement in specific areas, the standards of reproductive health services have been greatly lifted in the recent past and the OR approach of testing diverse strategies to solve service delivery problems has made an important contribution to this process.

Element II: NGO Strengthening Project

The NGO Strengthening Project, initiated in 1994, played an extremely valuable complementary role to the operations research component of the Cooperative Agreement. The project took

advantage of the considerably organized and extensive civil society sector that existed (and continues to exist) in Guatemala, in part an indirect result of the country's devastating history of civil war and violence against indigenous peoples which has led to deeply-rooted mistrust for the government among these groups, particularly in the area of contraception and family planning programs and services. In this context, the PC's philosophy for working with Mayan NGOs was to respect the strengths and opportunities inherent in Mayan culture, as well as the institutional mission and integrity of the vastly diverse range of nongovernmental groups working in Guatemala.

Thus, Element II of the CA proposed to test whether: 1) NGOs already working with Mayan populations could be technically strengthened to provide accessible, acceptable and quality reproductive and child health services in the highlands, and 2) these NGOs could be strengthened managerially to ensure sustainability of their reproductive health programs. After the formation of an extensive NGO directory between 1994 and 1996, the PC began to identify partner NGOs at the start of 1997; following a careful selection process carried out by a multidisciplinary team, six NGOs were selected: ASECSA, Women's Center Belejeb Batz, CDRO, IDEI, Proyecto Renacimiento, and SHARE. In 1998, two more NGOs were added to the membership (Pies de Occidente and Rxiin Tinament) and in 1999 the NGO El Recuerdo was added to the list, making a final total of nine NGOs which included two network organizations (ASECSA and SHARE).

In addition to establishing working relationships and building trust with partner NGOs, the primary challenges during the first year of the project (1997) were to develop tools and materials to be used among organizations that had virtually no experience working in the field of reproductive and child health (RCH), to obtain baseline data, and to determine NGOs' capacity to deliver RCH services. Several key activities were carried out as a result of a training needs assessment and situation analysis that indicated large deficiencies in NGO capacity to integrate family planning and reproductive health services into their current programs. These included the subsequent introduction of a "minimum management package" to assist NGOs in managing and administering their programs, as well as a successful educational exchange with MEXFAM in Mexico with the aim of providing an example to Guatemalan NGOs of a functioning RH training program.

An important component of the NGO Strengthening Program that also overlapped with Element I was the Mayan Fellows Program (MFP), initiated in 1997. In the MFP, local Mayan Guatemalans were recruited by the PC and granted a two-year fellowship that consisted of on-the-job as well as formal training by PC staff in RH, operations research, and organization/institutional capacity building. While the earliest Mayan Fellows played an important functional role in incorporating into current programs the findings and lessons learned from previous OR projects, newer Fellows were recruited under Element II to serve as technical resources in monitoring ongoing NGO partners' projects. Overall, Mayan Fellows have served as an extremely valuable local resource to both the PC and partner NGOs, and several have gone on to pursue further studies in areas including law and population research, as well as to take on professional posts with local and international NGOs.

In the area of community- and service-based education, the PC also adapted and introduced the Peru and Bolivia-originated "Self-evaluation Methodology" (or *Autodiagnóstico*) in Guatemala,

with assistance from the NGO Belejeb Batz. This community-based, participatory methodology served not only as an educational tool but also to complement the predominantly quantitative data collected in the needs assessment carried out in 1997, by compiling a more complete needs profile of communities and at the same time to train partner NGO staff in qualitative data collection and analysis.

One of the most important activities of the Population Council during Element II was the design, revision and adapting of extensive information, education and communication (IEC) materials to be utilized by local partner NGOs. During 1998 and 1999, several protocols and job aids were adapted and reproduced, and the majority of IEC materials were printed in 1999 after extensive validation and revision. Materials focused primarily on Integrated Management of Childhood Illness or IMCI (which the PC also introduced into Guatemala), management of obstetrical cases, and family planning. Many of these materials are currently being utilized by former partner NGOs and have also served within the program *Proyecto Calidad en Salud* (Project for Quality in Health) as a base for RH materials to be used on a national level.

Finally, this final report includes a summary of the end-of-project assessment carried out with all nine NGOs in 1997 as well as the impact evaluation of four NGOs carried out in 2001 using a standardized questionnaire applied to mothers of children under two years of age. Among the many important and positive results of these studies, one of the most dramatic findings was the increase in acceptance of family planning for birth spacing purposes among the study population, most notably related to the use of Depo Provera, which actually tripled during the project period. In addition, findings in the area of care during pregnancy, delivery and postpartum also reveal positive outcomes correlated with project activities. Percentages of women seeking prenatal care and receiving tetanus vaccines also increased significantly during the CA period; the proportion of women seeking assistance from trained personnel during delivery and birth was also shown to increase, thus representing an important shift from traditional birth attendant (TBA) use to assistance from trained health professionals in the case of obstetric emergencies. Additionally, women's knowledge of danger signs related to both severe diarrhea and lower respiratory illnesses significantly increased, as did their treatment-seeking behavior for the latter condition.

Overall, it can be concluded that the diverse programs carried out by the PC's partner NGOs during the NGO Strengthening Project under the Cooperative Agreement have contributed to the improvement of several critical reproductive and child health outcomes at the population level, albeit in a context in which there remains significant room for continued improvement. Additionally, the development and consolidation of a network of NGOs that provide services to Mayan populations in areas that have traditionally been underserved, along with the building of human resources within the Mayan population, illustrates other critical ways in which the PC has played a pivotal role in this slow but steady process.

II. ELEMENT I: OPERATIONS RESEARCH

A. Background

The strategic objective of Population Council (PC) operations research (OR) activities in Guatemala was to test innovative strategies to improve quality, coverage and access of reproductive health services, with a particular focus on the Mayan population of the highlands.

In Guatemala, the government is the primary provider of health care services, principally through the Ministry of Health and Social Assistance (MSPAS), and secondarily through the Guatemalan Social Security Institute (IGSS). However, APROFAM, the local IPPF affiliate, is the principal provider of family planning services, and has been expanding in recent years the scope of health care services offered to women and children. In the rural highlands and other parts of the country, local non-governmental organizations (NGOs) are also playing an increasingly important role in providing health education and services to the indigenous Mayan, half of Guatemala's population.

The Population Council's OR agenda in Guatemala has been a collaborative effort between the INOPAL and Frontiers in Reproductive Health (FRONTIERS) programs and the Cooperative Agreement (CA). While several projects overlap in terms of sources of funding and staff members involved, this report focuses only on those OR projects receiving funds exclusively from the CA and taking place during the CA period of 1994-2001.

In order to put the CA operations research projects within the broader context of the comprehensive portfolio of PC OR activities in Guatemala, Table 1 presents the timeline of PC's OR projects in the country during the period 1989-2001.¹ As the table indicates, PC completed a total of 44 OR projects in Guatemala, four of which were completed under INOPAL and FRONTIERS prior to the initiation of the CA, while five others were funded exclusively by field support to the INOPAL and FRONTIERS programs. Hence, a total of 35 OR projects were carried out exclusively under the CA between 1994 and 2001, with nine of these projects conducted in close collaboration (technical or financial) between the Council's OR program and the Cooperative Agreement.

Included in Annex 1 of this document are the seven individual reports from specific OR studies carried out during the Cooperative Agreement.

¹ Please see the Annex 2 for a more detailed listing of the total number of OR and technical assistance projects carried out by the PC between 1989 and 2001.

**Table 1. Timeline of OR Activities by Source of Funding.
Population Council, Guatemala, 1989-2001**

Year	Funding Source		
	Cooperative Agreement*	INOPAL/ FRONTIERS	Total
1989		2	2
1992		1	1
1993		1	1
1994	2		2
1995	5		5
1996	2		2
1997	5	1	6
1998	5	1	6
1999	6		6
2000	2	1	3
2001	8	2	10
Total	35	9	44

* Nine of the CA projects were conducted with direct technical assistance or partial funding from INOPAL/FRONTIERS.

B. Operations Research Projects

Operation research activities carried out by the Council have had three principal foci:

- Test strategies to improve quality, access and coverage of integrated reproductive health care in the public sector;
- Test innovative strategies to improve the health sector's response to the needs of the Mayan population; partners in these activities were primarily in the private sector (*i.e.* local NGOs), which is generally characterized by greater flexibility and coverage; and
- Disseminate results, and institutionalize and utilize successful strategies.

Overall, the Cooperative Agreement's OR projects were carried out with the aim of generating evidence to improve and expand the work of both local Guatemalan NGOs and the Guatemalan Ministry of Health (MOH) in providing reproductive health services to Mayan populations. Although there tends to be some overlap between study categories, OR activities can generally be classified into the following three study types:

Diagnostic and technical assistance: PC provided diagnostic assistance to Mayan NGOs, which consisted of research for the purposes of better understanding the target population, its incentives and fears, its language and perceptions, and other cultural factors relevant to its potential acceptance of a given reproductive health intervention. Technical assistance (TA) projects²

² This category refers to projects that are exclusively technical assistance, without any research component. The vast majority of the projects included some aspects of TA in addition to the research component.

aimed to improve service delivery in previously established programs by strengthening their different functional areas including: supervision; training; information, education and communication (IEC); and management of information systems.

Intervention research: These studies involved some type of experimental or quasi-experimental design to evaluate the effectiveness of the treatment against a second strategy or the status quo. Intervention projects included demonstration and evaluation projects that involved collection of data to measure trends in utilization, client satisfaction or other behavioral outcomes, with the intention of documenting results or identifying areas in need of improvement. The term “demonstration” is often used when a new service is offered for the first time (e.g. expansion of contraceptive choices such as offering Depo Provera and Norplant).

Dissemination, institutionalization, utilization: These projects involved presentations, publications, workshops and other activities aiming to inform diverse audiences of results, achievements or recommendations. Institutionalization activities involve scaling-up strategies or procedures, or establishing the use of job instruments at an institutional level and ensuring that such changes are institutionally sustainable. Utilization of results involves both dissemination of research findings and institutionalization.

Out of the 35 OR projects carried out during the CA period, eight were diagnostic and technical assistance projects, 24 were intervention studies, and three were dissemination and institutionalization projects.

C. Institutional Collaboration

The PC conducted a large number of its OR projects with assistance from other organizations and institutions. Specifically, nine projects were carried out in collaboration with the Ministry of Health (MOH), including Central Headquarters and Health Areas (for example, in the departments of Quetzaltenango, San Marcos and Solola); eight projects were conducted with APROFAM; two with IGSS, one study was a joint project between APROFAM and the IGSS (Norplant pre-introductory study), two with other governmental organizations (such as the Roosevelt Hospital or the Office of the Human Rights Attorney) and eight with NGOs other than APROFAM; these included AGES (Guatemalan Association for Health Education), *Asociación Toto Integrado*, Project Concern International (PCI), Rixiin Tinamet, and Renacimiento). The Council also collaborated with educational institutions, such as the School of Nursing of the *Universidad del Valle*, the *Universidad de San Carlos* (USC), and Princeton University.

D. Substantive Areas

The range of research topics covered under the Cooperative Agreement was wide and comprehensive. Research was conducted on nearly every major area related to quality of care, access to services, and sustainability issues; the topics also included provision of information to indigenous clients, establishing a constellation of health services, increasing the technical competence of service providers, and, in particular, improving the quality of postpartum and post-abortion services. The overall objective of these OR projects was to identify and test

strategies that would strengthen the capacity of local NGOs to provide reproductive health services on a self-sustainable basis, largely by involving them in testing models to introduce new services, to integrate public and private services, and to make inter-institutional collaboration a reality.

The aim of much of the research conducted during the initial years of the CA was to determine the availability and acceptance of FP services among indigenous populations in Guatemala. These projects focused on identifying culturally appropriate strategies to reach indigenous populations by working with and through local NGOs to develop different channels and mechanisms to communicate reproductive health messages. OR projects were also conducted to test and identify IEC strategies to make community-based contraceptive distribution more effective.

Another area of emphasis was improving the technical competence of service providers. In this area, the PC helped to train a substantive number of service providers at MSPAS and designed two distance education programs with the aim of reaching a broader audience; one program was directed at nurses (School of Nursing, *Universidad del Valle*) and another at service providers working at health centers and posts (USC).

Hospital-based postpartum and post-abortion services (*i.e.* post-obstetric event (POE), or POE services) were also an area of interest from the start of the CA. From the very beginning of OR activities in Guatemala, a diagnostic study of post-abortion services was conducted in collaboration with the IGSS. A regional conference on post-abortion care (PAC) was conducted in June of 2001, with the participation of directors and personnel in charge of obstetric services in all major MSPAS hospitals and maternity units. To complement this agenda, the FRONTIERS program developed a strategy aiming to: (a) improve the quality of postpartum services at the secondary level of care (health centers and posts), and (b) establish links, referral and counter-referral systems between the primary (community) and secondary (health centers and posts) levels of care. Finally, a situation analysis of POE services was conducted during 2001, among 17 IGSS and MSPAS hospitals. These studies provided the necessary background to, first, attract the attention of key decision makers to this important maternal health problem, and second, to motivate authorities to launch a national program aiming to improve these services in hospitals and among the primary, secondary and tertiary levels of attention.

The following table summarizes the major research areas covered by OR projects under the CA and the specific topics addressed within each area.

Table 2. Substantive areas of OR projects during the Cooperative Agreement Period. Population Council, Guatemala, 1994-2001

Substantive Area	Research Topics
Service access	<ul style="list-style-type: none"> • Acceptability • Accessibility
Information provision	<ul style="list-style-type: none"> • IEC • Community promotion • Health education strategies • School-based sex education
Constellation of services	<ul style="list-style-type: none"> • Job instruments to provide integrated services • Contraceptive choice (expanding contraceptive options, including introducing new methods such as Depo Provera (DMPA), Norplant and the necklace method) • Strategies to improve male participation in reproductive health services
Technical strengthening	<ul style="list-style-type: none"> • Training of service providers on contraceptive technology using the Hatcher, <i>et al.</i> handbook³ • Distance education programs for nurses (School of Nursing) and for service providers at health centers and posts (USC) • Improving reproductive health knowledge through innovative educational strategies
Postpartum / post-abortion services	<ul style="list-style-type: none"> • Situation analysis of post-obstetric event services, including post-abortion services at the IGSS and selected MSPAS hospitals • Strategies to improve post-partum services and establish links between primary and secondary levels of care
Capacity building and sustainability	<ul style="list-style-type: none"> • Creating linkages between public services and NGOs • Incorporation of reproductive health services by NGOs • Strategies for inter-institutional collaboration and NGO strengthening • Sustainability strategies (public and private organizations)

E. Application of the Comprehensive Operations Research Framework

The general OR approach is to first conduct a diagnostic study in the form of a needs assessment, followed by a situation analysis, qualitative study, and cost analysis. The second stage is to develop alternative problem solving strategies and, through experimental research, determine which strategies are more appropriate to solve a specific problem in a specific context. The final

³ Hatcher RA, Rinehart W, Blackburn R, *et al.* The Essentials of Contraceptive Technology: A Handbook for Clinic Staff. Johns Hopkins Population Information Program, July 1997.

stage is to disseminate, scale up and institutionalize (or generalize) tested solutions; that is, put OR results and findings into practice.

This comprehensive framework was successfully applied in the following areas, which correspond both to broad substantive areas and the specific research topics outlined in the previous table.

Acceptability and accessibility. During the early stages of the CA, studies were conducted to assess the acceptability and accessibility of FP services among indigenous populations. This research was followed by three intervention studies that attempted to test the feasibility of alternative solutions to problems identified. Study results were widely disseminated through publications and public presentations, which in turn prompted the interest of several NGOs to incorporate reproductive health services into their scopes of work. The result was increased access to FP services among indigenous populations.

Contraceptive choice. Initial diagnostic studies identified a clear need to expand the range of contraceptive methods available and to make them more acceptable to indigenous populations in Guatemala. The diagnostic assessment was followed by one OR intervention project aiming to expand a specific natural family planning method in the country – the necklace method – which was found to be generally accepted among indigenous populations. Other projects aiming to expand contraceptive choice included a pre-introductory study of Norplant as well as efforts to improve the quality of Depo-Provera services.

Capacity building. Another area in which the OR framework was successfully implemented was capacity building. Diagnostic studies conducted during the early 1990s identified, first, an acute need for reproductive health services amongst indigenous populations and, second, an underutilized resource base of NGOs that were interested in specifically addressing the populations' health needs but lacked training resources and technical capabilities. The PC conducted diagnostic and anthropological studies among family planning users and non-users in the highlands, and among urban and rural indigenous populations.

Based on this preliminary work, several interventions were conducted in collaboration with Element II of the CA (described in the following section of this report), aiming to design effective mechanisms by which NGOs could incorporate FP services into the range of those already provided. Other interventions included a re-engineering of APROFAM's community-based FP program, two projects conducted with the local NGO AGES focusing on the provision of reproductive health education through bilingual teachers and increasing access to services, one project conducted with the local NGO *Asociación Toto-Integrado* to test models of inter-NGO collaboration, and a project involving La Leche League of Guatemala (LLLG).

Integration of services. Diagnostic studies focusing on service integration revealed that FP, which were already scarce, were being provided solely on a single-service basis: *i.e.*, through a vertical system. This represented a highly ineffective and costly practice. To solve this problem, a job instrument was developed and tested to provide integrated services that could address several reproductive health needs of women attending MPAS health centers and health posts during the same visit. The instrument was improved through two complementary projects. After

successful testing, the job instrument was extended and institutionalized at the national level. As described in the following section, a similar process was conducted to develop and test an algorithm to provide Integrated Management of Childhood Illness (IMCI) under Element II of the Cooperative Agreement.

Sustainability. Diagnostic studies have been conducted by the PC in the area of sustainability since 1995, including an estimation of savings resulting from the provision of integrated attention and willingness to pay for public (Roosevelt Hospital) and private services (APROFAM). It was concluded, following initial OR studies, that this area would benefit from further research to design and test interventions to improve the financial sustainability of these organizations.

F. Short-term Technical Assistance and Special Activities: 1997-2001

Beginning in 1997, the Population Council provided technical assistance (TA) to several education and health institutions and organizations on a wide variety of topics. Following are brief summaries of TA activities by year.

1997: Short-term TA and/or training was provided during this year to several institutions, programs and country and regional colleagues: the National Maternal and Child Health (MCH) Program, APROFAM, Plan International, Japanese International Cooperating Agency (JICA), AGROSALUD, and MotherCare. Examples of these include:

- Assistance to MotherCare in training traditional birth attendants (TBAs) and in the provision of FP methods at facilities. Training sessions for TBAs took place in Panajachel and Sololá;
- Orientation and training provided to a group of ten APROFAM clinic directors in the use of the Algorithm for Systematic Service Delivery;
- Hosting of an international conference and information exchange in Guatemala among principal investigators from the PC (or INOPAL III)–sponsored research projects; over 40 researchers attended from Ecuador, Guatemala, Mexico and Peru;
- Training of 10 district physicians and six district nurses in Mazatenango to provide Depo-Provera.

1998: Technical assistance and special activities made up a large part of the Population Council's work during 1998. In addition to specific TA projects, several of which are outlined below, activities included the participation of Council staff in various key meetings and committees including the *Consejo Nacional de Investigación en Salud* (CONAIS), the San Marcos Committee on Maternal Mortality, the San Marcos Medication Selection Committee, and the Inter-institutional Coordination Committee of the MSPAS.

Of particular importance was the Council's participation in the National MCH Program, which requested assistance in the committees organized in San Marcos and Quetzaltenango for the analysis of maternal and infant mortality. Participants in the committees analyzed mortality data with attention to trends, causes, and geographic risk factors in order to formulate recommendations to prevent future deaths, including the reduction of unwanted pregnancies,

reduction in obstetric complications, and improvements in prenatal care. The committees themselves had a diverse membership and included representatives from national and district hospitals, faculty of medicine from the *Centro Universitario de Occidente*, MotherCare, and Project Hope.

Other TA activities included:

- Training of nine AGES educators in the use of an algorithm to determine reproductive health (RH) service needs;
- Three half-day training sessions in family planning service provision for MSPAS personnel in Amatitlán;
- Training on counseling and injectable contraceptive methods with an updating of knowledge on all methods for district chiefs in Chimaltenango;
- Coordination of meeting to review informed consent practices with the MSPAS, the IGSS and APROFAM (at USAID/G-CAP request);
- TA to the National Council for Health Research;
- Training in Norplant Removal in the Health Center of Sayaxché, Petén;
- TA to the Maternal Mortality Analysis Group in Quetzaltenango's Health Area, MOH;
- TA to APROFAM on Systematic Offering of MCH Services and the Algorithm for the Systematic Offering of Services;
- Training in "team building" to the Guatemalan MOH, Hope, and CARE/San Marcos;
- Participation in the technical committee to support an adolescent hotline initiated by the National MCH Program in the final quarter of 1998, including TA to develop a register of calls and an SPSS database.

1999: Several TA workshops were carried out during 1999 focusing on the following topics:

- Prevention of nosocomial infections (San Marcos Hospital);
- Updates on contraceptive technologies with Rxiiin Tnamet, the Uspantán health district (El Quiché), and for a small group of personnel from the Guatemala Air Force;
- Training in teamwork among health workers (Quetzaltenango health area);
- Contraceptive technology and Depo Provera provision (Sacatepequez health area);
- International sources of funding for non-profit agencies (IDEL, or *Instituto de Educación Integral para la Salud y el Desarrollo*).

The PC also provided training and technical assistance during 1999 to CARE personnel for an OR project being carried out in the Verapaces. Related activities included:

- Supervision and TA for CARE personnel in the initial training provided to the MSPAS health center on the topic of service integration;
- TA to define strategies for field work; logistical training;
- Contraceptive technology update for CARE and MSPAS personnel.

2000: TA activities during this year were primarily related to two main projects: the CARE postpartum care project in Verapaces (which continued up until August of 2001) and OR workshops for faculty members at the USC in Guatemala. Activities are outlined below.

Postpartum care project (CARE)

- Training of trainers in the Systematic Offering of Reproductive Health Services;
- Visits to model health centers in Sololá with health service personnel from the Verapaces (the study's target area) to acquaint them with changes in the service model within the research project "Re-engineering Health Services";
- Revision of the final report.

Operations Research Workshop, USC. At the request of faculty from the Rural Supervised Professional Exercise program (EPS) of the Medical Sciences Department of the University of San Carlos in Guatemala, a five-day operations research workshop was designed and carried out in November for ten faculty members, three coordinators, and two program directors. The objective of this workshop was to develop OR proposals for projects to be conducted with final year students completing their EPS in rural areas in 2001. Among other documents, participants received an example of a research proposal and reference material on operations research. This material was also intended to serve faculty members in replicating OR workshop with the EPS students.

The workshop in November resulted in the completion of two proposals, with the respective titles: "Diagnosis and implementation of a post-abortion care model in health centers", and "Fulfillment of prenatal and postpartum care program norms". A third proposal was two-thirds developed with plans to complete the remaining sections: "Testing strategies to improve the quality and access of postpartum services".

2001: Technical assistance and special activities during 2001 fell into three major events or project areas:

Regional Conference on Post-Abortion Care Programs in Guatemala. A Regional Conference on Post-Abortion Care Programs in Latin America was held in June of 2001 in Guatemala City. The meeting was organized in collaboration with the LAC Regional Office of the Population Council, the FRONTIERS Program, CIESAR, and the Guatemalan MOH. The purpose of the meeting was to present and discuss lessons learned in programs aiming to improve post-abortion services in Latin America. Thirteen international and nine national speakers delivered 22 presentations. Additional conference activities included a clinical workshop, a debate, and material display tables by participating organizations. Guests included 14 directors of health areas, 47 directors of national hospitals or heads of gynecology-obstetrics departments, 15 representatives from local NGOs, and 15 international observers.

Emergency Contraception Workshop. Also in June of 2001, an Emergency Contraception (EC) workshop was held to update key decision-makers in Guatemala on EC and progress made in Latin American programs. The workshop was coordinated by Dr. Raffaella Schiavon, from the Population Council's Mexico office, and Dr. Angeles Cabria, from the San Francisco-based Emergency Contraception Consortium, at no expense to the Cooperative Agreement. Participants

in this workshop included key decision makers from the Ministry of Health, the General Attorney's Office and the Directorate of Forensic Doctors. One anticipated result of this workshop was the established provision of EC information and services to victims of rape when filing reports.

Technical Assistance to the Department of Medical Sciences at the USC. Following the operations research workshop conducted in November of 2000, the PC continued to provide technical assistance to faculty members from the Department of Medical Sciences of the USC to implement small-scale OR projects. By the end of the year, two diagnostic studies had progressed significantly: (a) an epidemiological assessment of abortion in the area of Petén and (b) an assessment of the validity and reliability of maternal mortality registrars in the area of Chimaltenango. These technical assistance activities were intended to facilitate the process of institutionalizing OR in reproductive health themes within the University, an institution that is responsible for preparing a large part of Guatemala's human medical resources.

G. Process and Impact Assessment of OR in Guatemala: 1998-2000

In 1998, the Population Council and the FRONTIERS Regional Associate Director for Latin America proposed an extensive process and impact evaluation to document the utilization of results from the portfolio of OR projects conducted over the past decade in Guatemala. Data collection, which took place in April and May of 2001, relied on three primary sources of information: key informant interviews, document review, and several site visits to health centers and NGOs that have implemented OR interventions. A scoring system was used to evaluate the 22 OR projects on a set of process and impact indicators. The projects reviewed were largely intervention studies, but also included diagnostic and demonstration/evaluative studies. The full report for this evaluation, conducted and written by Dr. Jane Bertrand (Professor in the Department of International Health and Development, Tulane University) and Celeste Marin (Evaluation Specialist based in Washington, D.C.), is included in Annex 3.

Among key findings, the evaluation identified specific areas in which OR studies performed particularly well, including: the relevance of research to local program managers, the effective dissemination of results to key audiences, and the active participation of implementing organizations in the study design. Overall, in 13 of 20 studies (excluding the two that were diagnostic), the intervention proved effective. Four of the studies yielded mixed results, and three interventions were judged to be ineffective. In 14 of the 22 studies, the implementing agency acted on the results. Although research findings did not generate substantial new funding, a number of studies did lead to policy changes, primarily at the program level.

Evaluation findings also highlighted specific areas for improvement. For instance, several of the studies had too many, or inappropriate, objectives that described activities to be carried out, not results to be achieved. In addition, most organizations did not build sufficient technical capacity to enable them to conduct subsequent OR projects – a finding that underscores a dilemma for the Population Council between wanting to maximize skill-building and ownership of results in the implementing agencies, while also needing to “step in” in order to ensure a quality product (thus running the risk of having too much influence over the technical management of a study).

In conclusion, some important factors in successful OR activities were identified as: charismatic leadership; close monitoring and supervision of the intervention; simple, easy to use materials; and a feasible design. Factors considered to increase utilization were:

- A good match between the intervention and the implementing organization;
- Immediate, observable improvements as a result of the intervention;
- Provider motivation;
- Continuing TA; and
- Fortuitous timing.

H. Element 1: Summary and Conclusions

Specific OR projects conducted under the CA consistently focused on two main problems: increasing access among the indigenous and rural populations to quality FP services, and strengthening the capabilities of the MOH to provide RH services in general and specifically FP services. The first problem (increasing access to family planning services among indigenous populations) was addressed through a variety of measures. Perhaps most importantly, operations research successfully helped to strengthen the management and technical capabilities of indigenous NGOs and their health services for women and children. The PC worked to successfully expand and improve the NGO community's ability to provide clinical health services, notably adding family planning to their range of services, including Norplant and injectable contraceptives such as Depo Provera. A major achievement in this area was the increase in the use of natural FP among the target population, particularly the necklace method.

In addition to testing strategies to increase in-service training for community-based distribution (CBD), the PC also tested the use of bilingual teachers in providing education and RH messages in rural communities in indigenous languages, which was found to be a successful strategy in reaching the target population. The PC also assisted women's community groups in the important task of identifying the principal health problems affecting women in rural communities and establishing a process to address them through a self-diagnosis methodology, described in more detail in the following section detailing Element II activities. An additional line of research also involved designing and testing strategies for the reduction of family violence, the most commonly cited health and social problem in a recent survey conducted by the PC and NGOs in rural areas of the highlands.

Likewise, the PC addressed the second major problem outlined above (strengthening the capacity of the MOH to provide RH services) through a variety of approaches. A key component of PC activities involved applying lessons learned in operations research studies, particularly in the public sector at the district level. An important accomplishment in this area was the development and testing of an algorithm to increase the delivery of comprehensive RH services – a strategy later adopted by the MOH as one of its national plans. The PC also pioneered in Guatemala a methodology for on-the-job training for reproductive health service providers. This has proven successful in not only increasing knowledge but also by resulting in immediate changes in providers' practices. While the methodology is not applicable to all training needs, it offers a proven methodology for assuring improvements in practices.

During the CA period, the PC trained over 1,500 MOH personnel in family planning and integrated MCH services. Close ties were also established in the course of these trainings with district and area-level MOH personnel throughout the Guatemalan highlands. A follow-up evaluation demonstrated that the personnel trained in integrated services continued to practice what they had been taught a year and a half after the training, thus overcoming the frequently encountered failure to consistently apply new skills after training. Finally, technical assistance and training were also provided in the public sector in other topics, including counseling, working as a team, and maintaining positive staff morale.

The PC also brought to Guatemala methodologies for studying costs in both the public and private sectors. Council research demonstrated the cost-savings that resulted from providing integrated MCH services, rather than the series of isolated services that continue to be the norm in service sites that were not part of the CA activities, despite MOH policy to the contrary.

Finally, it is noteworthy that worldwide and throughout Latin America, the Council has developed a number of methodologies that could be applied in Guatemala given the right political environment. Among these are strategies for improving the quality of post-abortion and post-partum care in public hospitals – both areas of serious deficiency in Guatemalan health care – and a variety of job aids to improve the quality of services.

In conclusion, evidence from PC OR activities in Guatemala indicates that RH services have improved in the recent past and that the OR approach of testing diverse strategies to solve service delivery problems has made an important contribution. The development and consolidation of a network of NGOs that provide services to Mayan populations in areas that have traditionally been underserved and the development of human resources within the Mayan population illustrate other ways that the PC has played a pivotal role in this slow but steady process.

Results, indicators and benchmarks for Element 1 are included in Annex 4.

III. ELEMENT II: NGO STRENGTHENING

A. Background

The Population Council's initial motivation to work with NGOs in Guatemala, and to build their capacity to deliver quality reproductive health services, stemmed from the distinct political and social situation that the country faced in the early 1990s. Thirty-six years of civil war and violence against indigenous peoples have served to increase social inequality within the country and specifically the marginality and poverty that the indigenous population has historically faced.

The current government of Guatemala was at this time (and remains) extremely conservative. No national RH program existed until January of 2000, and this program was signed into law only recently (October of 2001). When the Population Council and USAID initiated the Cooperative Agreement in 1994, there were very limited signs of real commitment and action at the national or even local levels with regard to the formulation of national strategies in the area of reproductive health care. Furthermore, there is an historical opposition to contraception and other reproductive health services (particularly those offered within the public sector) on the part of Mayan peoples, due largely to unilateral aid projects that, in the context of war, were regarded as part of government activities against indigenous populations, including allegations of genocide.

One fortunate by-product of Guatemala's devastating history, however, is that it has led to one of the most organized civil societies in the Latin American region. Despite the continued governmental mistrust on the part of many Mayan people, as well as on-going discrimination and marginalization, the Peace Accords (signed in 1996) acknowledged the importance of Mayan people's participation in the post-war reconstruction process. With this background, the PC's philosophy for working with Mayan NGOs has been to respect the strengths and opportunities inherent in Mayan culture, as well as the institutional mission and integrity of the vastly diverse range of nongovernmental groups working in Guatemala.

In this context, the NGO element of the Cooperative Agreement proposed to test whether:

- NGOs already working with Mayan populations could be technically strengthened to provide accessible, acceptable and quality reproductive and child health services in the highlands;
- These NGOs could be strengthened managerially to ensure sustainability of their reproductive health programs.

B. Partner NGO Selection: 1994-1996

After initial exploratory and preparation activities at the start of the CA, in 1995 the Population Council developed an NGO inventory that identified 162 NGOs in the five USAID/G priority departments of Chimaltenango, San Marcos, Sololá, Quetzaltenango and Totonicapán. In 1996, USAID added Huehuetenango and Quiché to its priority departments. The United Nations

Development Program (UNDP) then carried out a national inventory of NGOs, in 1996, and found that 411 were formally registered with the government of Guatemala. The PC in Guatemala found that most of these NGOs were small and covered limited geographical areas, and were affiliated with a number of umbrella organizations and networks that operated at departmental and national levels, often participating in one or more umbrella organization or federation. Despite the diversity in structure and focus among these groups, PC developed several very successful projects working with local indigenous NGO's by the end of the initial CA period (1994-1996). These projects are detailed in the annual reports submitted previously to USAID.

C. Summary of Project Activities: 1997-2001

Following is a year-by-year summary of the main activities carried out under the NGO Strengthening Project (Element II) between 1996 and 2001. The last two years of the CA extension (2000 and 2001) are presented together, as the final year consisted primarily of monitoring ongoing activities within the project as well as conducting the final evaluation.

1997. Working under the hypothesis that local NGOs can provide quality reproductive and child health care to the rural, indigenous population, the PC initiated the project by establishing solid bases of collaboration between their own offices and partner NGOs through a competitive grant process.

Year one principal activities were:

- Identification and selection of NGOs demonstrating interest in introducing and integrating reproductive/child health into their existing programs;
- Development of a competitive grants process to select the most appropriate NGOs and NGO Networks proposals for funding and technical assistance;
- Assessment of selected NGOs' current administrative and financial management capacity, taking into account their ability to manage project funds in compliance with PC requirements;
- Design and completion of a training needs assessment (TNA), which included an assessment of NGO infrastructure and technical capacity for offering R/CH services; this TNA later led to the development of a comprehensive training plan in R/CH;
- Design of cross-sectional study methodology for the baseline and final evaluations, focusing on key R/CH indicators. NGOs were also provided with a data sampling analysis structure, and the NGO studies' databases were merged in order to carry out an overall analysis, which would establish baseline information for the NGO Strengthening Project;
- Promotion of the use of baseline data within the NGOs to: design appropriate projects informed by and able to respond to the identified needs in target populations, establish indicators to monitor progress in the end-of-project evaluation, and identify specific population groups on which to focus interventions.

The NGO selection process took place in the beginning of 1997. Of the over 40 NGOs that originally applied to participate in the CA, all were required to submit project proposals based on

a guide and format developed by the PC. A multidisciplinary team, consisting of PC staff as well as members of other local agencies and organizations, then reviewed the proposals and made the first selection of 6 NGOs (ASECSA, Women's Center Belejeb Batz, CDRO, IDEI, Proyecto Renacimiento, and SHARE). In 1998, two more NGOs were added to the membership (PIES de Occidente and Rxiin Tinamet), and in 1999 one more was selected (El Recuerdo), making a total of nine NGOs which included the two network organizations of ASECSA and SHARE. Details on the partner NGOs, including exact dates of their participation within the CA, are presented in Table 3 in this Element II report.

The principal challenges during the first year of the project were: to develop tools and materials to be used by NGOs that had virtually no experience working in the field of R/CH, to obtain population baseline data, and to determine NGOs' capacity to deliver R/CH services, based on a TNA and brief situation analysis. The TNA and SA included: 1) a general description of clinical and community health service providers including their level of training, supervision and program management; 2) a review of existing training materials, curricula, manuals and guides for service providers as well as IEC materials; 3) an assessment of current existence/status of supervision, monitoring and evaluation systems, support materials, and job aids related to quality assurance within the partner NGOs.

The TNA demonstrated a large deficit in NGO capacity to implement R/CH services. The limited training curricula that did exist had not been updated in terms of RH information, and information on FP was out of date, incomplete, and inadequate. With respect to child health, all NGOs had carried out related interventions in the past, but none had developed or implemented standardized diarrhea and pneumonia integrated case management strategies as recommended by the World Health Organization (WHO). None had developed any type of monitoring and evaluation systems, and, finally, community-oriented IEC materials and job aids were virtually absent.

In response to these large deficiencies, the PC developed a training curricula in 1997 to strengthen NGO partners' capacity to train, supervise and evaluate R/CH health service providers, and to use appropriate IEC materials for providing counseling and services to the communities in which they worked.

The Mayan Fellows Program. One of the central activities initiated during 1997 was the Mayan Fellows Program (MFP). This program responded to a number of factors. Historic discrimination has restricted the country's indigenous peoples to minimal levels of educational attainment and limited participation in mainstream political, economic and social life. Mayans generally lack opportunities for formal, advanced academic and technical training – a situation that perpetuates their poverty and marginal status – as well as a health system that provides low quality care, fails to meet the specific needs of indigenous peoples, has poor coverage and provides limited access to even the most basic health care services.

In the MFP, local Mayan Guatemalans were recruited by the PC and granted a two-year fellowship that consisted of on-the-job as well as formal training by PC staff in RH, OR, and organizational/institutional capacity building. This program was based on the philosophy that Mayan people themselves understand best the distinct needs of their communities and are

therefore the choice candidates to determine and provide appropriate responses in terms of innovative interventions to improve reproductive and infant health. The fundamental goal of the program, therefore, is to identify, train and support the development of future Mayan leaders who will then go on to occupy decision-making positions in the MOH, local government or NGOs working on issues related to R/CH.

Specific tasks of the fellows included:

- Designing, supervising, monitoring, and evaluating research and projects in R/CH at the community level;
- Participating in the dissemination of results and lessons learned from important research studies and project experiences;
- Providing technical support in the design, implementation and monitoring of local NGO activities and participating in process and impact evaluations, using the results to modify and improve projects;
- Supporting the development of NGO networks and strengthening civil society to help ensure that the needs and desires of indigenous peoples are reflected in local and national health policy and programming.

The MFP has indeed been a great success and served as an enormous resource for all involved. While the earliest Mayan fellows played an important functional role in incorporating into current programs the findings and lessons learned from previous OR projects, newer Fellows were recruited under the NGO Strengthening Project to serve as technical resources in monitoring ongoing NGO Partners' projects. In addition, in the seven years of the program, several fellows went on to pursue further studies at the undergraduate and master's level in areas including law and population studies, as well as to take on professional posts and consultant positions with local and international NGOs. Overall, Mayan fellows have served as an extremely valuable local resource to both PC and partner NGOs.

1998. While 1997 was mainly devoted to establishing working relationships and building trust with partner NGOs, conducting the needs assessment, and refining NGO work plans, 1998 focused on technical training in R/CH interventions and the introduction of a "minimum management package" (detailed in Project annual reports previously submitted to USAID). These activities were based largely on the population needs areas identified in the baseline survey from Year 1 (1997).

Year two principal activities included:

- Training and direct technical assistance to partner NGOs;
- Introduction of the IMCI strategy and the initiation of an OR project to adapt and test this strategy at the community level;
- Introduction of the "Self-evaluation Methodology" (*Autodiagnóstico*);
- Development, dissemination and training in IEC materials.

Due to perceived taboos around FP, formal trainings began in the area of child health. In child health services, training and capacity building among partner NGOs resulted in the

standardization of integrated case management protocols outlined in IMCI. In collaboration with the PC, two NGOs adapted and field tested clinical and community-based IMCI protocols that included: information and support for the child's caretaker (usually the mother), compliance with recommended IMCI strategies, and follow-up of all cases with a health care provider.

With respect to women's and reproductive health/family planning, it was soon discovered that the majority of training efforts had previously focused exclusively on health promoters, and the decision was made to expand training to include traditional birth attendants (TBAs) who were identified as playing an important role in communities. The specific objectives of training and technical assistance in the area of family planning were to increase access to quality services in project areas and specifically to improve the availability of a broader variety of FP methods. In addition, FP counseling and IEC materials were aimed at encouraging clients to select, correctly use, and continue to use the method most appropriate to their individual reproductive intentions.

To complement the predominantly quantitative data collected in the NA during Year 1, the *Autodiagnóstico* methodology was employed in an effort to compile a more complete needs profile of communities and at the same time to train partner NGO staff in qualitative data collection and analysis. This community-based, participatory methodology was first introduced in Peru and Bolivia in the early 1990s and adapted to the Guatemalan context by the PC in collaboration with a partner NGO, Belejeb Batz (BB). Although the initial *Autodiagnóstico* was actually carried out in the first year of project implementation, it warrants mention here as the majority of community-based needs assessments and community mobilization efforts took place in year two (1998).

The training programs, which developed out of results from both the baseline study as well as the *Autodiagnóstico* analysis, served the valuable purpose of creating new opportunities for partner NGOs, while at the same time building capacity in key areas of R/CH, thus gradually preparing NGOs for the final phase of service delivery.

To summarize, the following table outlines the organizations that initiated partnership work with PC between 1997-1998 and received funds and technical support from the Population Council.

Table 3: Summary of NGO Projects Awarded in 1997 and 1998

NGO	Main Focus	NGO Project Coordinator	Dates	
			Initiation	End
ASECSA	Introducing R/CH programs in 11 associated NGOs, and later in all partner NGO services	Hugo Icu	9/1/97	8/31/99
Women's Center Belejb Batz	Working with women's groups in four municipalities in the Department of Quetzaltenango	Norma Quixtán	9/1/97	8/31/98
	Institutional Strengthening and <i>Auto-diagnóstico</i> directed to RH activities among community-based Mayan women's organizations		10/1/98	8/31/98
CDRO	Improving access to infant and RH services in two communities in Totonicapán	Augusto Tzunun	9/1/97	8/31/99
IDEI	Improving access to infant and RH services in two municipalities in Quetzaltenango	Janet Ikeda	9/1/97	8/31/99
Proyecto Renacimiento	Improving infant and RH service delivery in a large municipality in the department of Chimaltenango	Gonzalo Ball	9/1/97	8/31/99
SHARE	Collaborating with six partner organizations in the departments of Quetzaltenango, San Marcos and Sololá	Leticia Coroy	9/1/97	8/31/99
PIES de Occidente	Introducing and expanding R/CH activities	Aura Pisquiy	7/1/98	8/31/99
Rxiin Tnamet	Expanding RH activities	Leticia Toj	7/1/98	8/31/99

1999: While technical assistance remained a component of activities during year three, the main emphasis was on specific competency-based training aimed at bringing NGOs to an appropriate level of technical capacity for delivering services.

Principal activities in year three included:

- Training in and institutionalization of childhood illnesses case management based on IMCI protocols, obstetrical case management, and family planning services;
- Development of IEC materials for counseling and public education;
- Implementation of a monitoring, supervision, and evaluation system.

These activities resulted in the following achievements:

- All NGO partners arrived at an appropriate level of technical capacity to deliver FP services (modern and/or natural methods), to employ IMCI at both community and individual service levels, and to institutionalize obstetric management protocols (MotherCare).
- PC produced, disseminated and trained NGOs in the use of educational materials and job aids related to the selected interventions.
- NGO extension (2000-2001) workplans focused on improving service access and coverage. The Reproductive Health Algorithm was introduced into NGOs' services.
- The validation, production and institutionalization of the Self-Evaluation (*Autodiagnóstico*) methodology was completed with the Women's Organization Belejeb Batz (BB). BB disseminated the results among other NGOs and interested organizations, who have begun to develop strategies to include men in the *Autodiagnóstico* processes.
- PC completed OR to test and adapt the IMCI strategy at the community level; dissemination of results and lessons learned was carried out at both community and clinic levels.

Collaboration with MEXFAM. In addition to the topics mentioned above, an important activity initiated in 1999 was the training of partner NGO project managers and key staff through a site visit to the program of the *Fundación Mexicana para la Planificación Familiar* (MEXFAM), IPPF affiliate. This exchange in Mexico was pursued as a result of locating a functioning RH training program that would be receptive to and supportive of indigenous NGO service delivery. It was indeed met with great enthusiasm by partner NGOs who returned from the experience in Mexico with greater motivation to include RH in their existing programs. This exchange with MEXFAM also represented a genuine example of South-South collaboration that permitted the more experienced Mexican NGO to provide valuable training and lessons learned to a Guatemalan "sister organization" in the same language and within a similar cultural context. Specific details on activities carried out during the exchange are outlined below, in the sections "Technical Strengthening" and "Sustainability Training."

Monitoring, Supervision and Evaluation. The implementation of monitoring, supervision and evaluation systems with NGOs took various forms. Although the incorporation of OR lessons learned has occurred to some extent throughout the life of the Element II project, it was in the third year of activities that opportunities arose within the newly strengthened NGOs to fully implement projects based in OR findings. For example, an important instrument for the provision of integrated R/CH services, the Algorithm, was included in service delivery in all NGO clinics. In addition, the necklace method, which had been shown to be effective in Population Council OR, was introduced in all new manuals and IEC materials produced during Element II.

In July and August of 1999, an external mid-term evaluation of the NGO Strengthening Project (detailed below) was carried out, thus producing information on progress that had been made toward implementation of key protocols as well as toward institutionalization of new R/CH services. Information, lessons learned, and recommendations derived from OR studies also provided input for the continuation and expansion of the Element II Project into the year 2001.

Throughout this evaluation process, the Council also worked to strengthen NGOs' supervision and monitoring systems, which continued to develop and improve throughout the life of the

project. Information gathered through this effort was disseminated among partner organizations and used by both NGOs and the PC for program evaluation and planning.

2000-2001. Training of NGO technical staff and community agents continued into years four and five, with emphasis on ensuring the sustainability of R/CH interventions after the year 2001, which would be the last year of the Population Council's NGO Strengthening project.

Years four and five principal activities included:

- Improving access to NGO services, in terms of: (1) quality of care, (2) cultural appropriateness, and (3) geographical barriers;
- Improving coverage, with respect to: (1) IEC materials designed to promote and increase the demand for services, (2) use of the RH Algorithm, (3) supervision and monitoring, and (4) home visits and other community-based activities;
- Incorporating findings from operations research into existing programs and procedures. Some immediate applications were: the Blanket Rule Rhythm Method, RH Algorithm; "Involving Men in Reproductive Health in El Quiche," and "Reproductive Health Education in Indigenous Areas Through Bilingual Teachers in Guatemala";
- Technical training and continued support for NGOs through workshops and meetings using the Quetzaltenango resource center, in addition to direct technical assistance;
- Elaborating training curricula to incorporate gender issues and male involvement into NGO work.

Efforts and new directives to improve quality were also continued during the fourth and fifth years, with selected strategies that had been utilized in 1997-1998, shared and tested by interested NGOs, including the *Autodiagnóstico* and IMCI. Additionally, selected topics related to reproductive and family health were introduced on a small scale to complement the work of NGOs, including domestic violence, early detection of cervical and breast cancer, prevention of sexually transmitted infections (STIs), and work with adolescents.

Finally, to facilitate the implementation process and guarantee that NGOs and NGO Networks would indeed institutionalize R/CH components that had been learned during the four years of the project, PC developed an 11-module training curriculum that covered all technical areas explored. During 2001, the PC had begun training staffs from NGOs in the 11 modules, but only on a trial basis. The 11 modules, discussed further below, covered the following areas:

1. Training of Trainers and Facilitators (*Capacitación de Capacitadores y Facilitadores, or CAFE*)
2. Family planning
3. *Autodiagnóstico* methodology
4. Algorithm for the Integrated Delivery of Reproductive Health Services
5. The necklace method
6. IMCI and IMCI-C (community-level IMCI)
7. Sexual and reproductive health education
8. Training on monitoring
9. Information, education and communication (IEC)

10. Logistics and Administration System (SIAL)

11. Management training

D. Mid-Term Evaluation

The mid-term evaluation of the Population Council Element II⁴ served three main purposes: 1) to assess progress toward the implementation of key processes initiated since the start of the project and the institutionalization of R/CH services in each of the NGOs' health programs, 2) to determine the extent to which lessons learned in the OR project component (Element I) had been included in the NGOs programs, and 3) to identify lessons learned and provide recommendations for the Element II expansion and continuation until the year 2001. In general, the mid-term evaluation focused primarily on technical capacity building among participating NGOs, and not on administrative and financial strengthening, which was also undertaken by the project.

The mid-term evaluation used a qualitative methodology that included documents review, individual and group meetings with the PC staff, field visits to all nine NGO counterparts, individual interviews with NGO directors, and individual interviews and/or group discussions with NGO staff and community health workers.

Summary of Main Findings and Recommendations

Evaluation findings indicated that the strategy employed by the PC to offer technical, managerial and financial assistance had been successful in strengthening partner NGOs, who regarded the PC not only as a funding source, but also as an interested partner and a resource for technical and administrative assistance. NGOs felt that the PC had been respectful of their institutional autonomy, allowing each organization to adapt the strategies and methodologies proposed by the PC to the structure of their individual programs.

Although prior to the PC project only two of the nine NGOs provided clinic-based reproductive health and family planning services, six were doing so to some extent by the time of the mid-term evaluation, with the only exceptions being ASECSA and CDRO. However, notable changes in attitudes had taken place in personnel from all NGOs with respect to RH/FP. Most NGO personnel had come to acknowledge the enormous need for quality reproductive health services in the communities where they worked, and were now offering natural and modern family planning methods along with related information and education. In addition, there was evidence that NGOs were taking into account the lessons learned in the OR relating to the provision of culturally appropriate and high quality services.

With respect to child health services, prior to the PC project, four NGOs were providing services relating to treatment of diarrheal and acute respiratory infections. Two NGOs (CDRO and Pies) who had participated in the operations research later adapted it for community-based health workers (IMCI-C). With the exception of ASECSA (which is not a direct provider of services), seven of the eight partner NGOs were providing selective child health services and increasingly

⁴ Mid-term Evaluation of the Population Council's Element II: Technical and Financial Assistance to NGOs. Report prepared by E. Hurtado, M. Seday, E. Molina, A. Sánchez and M. Julia Ruiz. The Population Council, August 23, 1999.

moving towards a more comprehensive and integrated approach to the treatment of childhood illnesses.

Recommendations included further strengthening the provision of clinical R/CH services through practical training, as well as continued emphasis on the provision of IEC and health services at the community level through CHWs. Recommendations also stressed the identification of inputs, processes and outputs to be monitored using appropriate and standard monitoring techniques that allow for periodic and timely feedback on the projects. A common theme throughout the recommendations was that the partner NGOs, who then shared many common strengths and skills that they had developed through the Project, could become a source of mutual technical assistance among themselves.

E. Extension of NGOs and NGO Networks Subgrants

In 1999, the USAID/G-CAP Mission extended both Elements I and II until the year 2001. Based on this, Element II also extended NGO projects until October 2001.

By 1999, the PC had distributed technical guidelines to participating NGOs and NGO Networks. All eight partner organizations presented extension work plans and budgets to continue and expand their current work, which were reviewed and negotiated individually with NGO project managers and/or directors by September of 1999, so that the NGOs could continue their projects without interruption.

As described in the individual NGO project reports submitted to the PC on a trimester, semester and annual basis, NGOs presented strategies to deliver MCH and RH/FP services, including counseling and the application of the reproductive and IMCI algorithms for integrated health service delivery. Many of the NGOs expressed a high level of interest in including RH-related themes in the extension projects, such as gender issues and the inclusion of men in RH, as well as strategies to work with the youth population. Nearly all of the proposals contained references to project expansion, either geographically or in a service context. These proposals were seen as the strongest mark of success for the PC project, and illustrated the way in which organizations' individual programs and capacities had been greatly enhanced through the addition of quality RH components and the establishment of valuable networks among NGOs. By the conclusion of the CA, all of the partner organizations wished to continue receiving support and, furthermore, wanted to take advantage of this unique opportunity to include new elements of comprehensive reproductive health services in what were becoming well-integrated R/CH programs.

While all partner NGO projects were extended to 2001, one new NGO was added in 2000 through a sub-grant to the *Cooperativa El Recuerdo* in Jalapa (not one of USAID/G-CAP specific priority departments, but one with markedly poor health indicators and limited access to health services). Out of the total of nine sub-awards, six were granted to grassroots organizations and three to NGO Networks (ASECSA with five partner organizations, Renacimiento with six NGOs from Chimaltenango and Sololá, and SHARE with six ICs-Cooperating Institutions) - totalling 26 NGOs that received direct financial and technical aid from the PC, and roughly 90 NGOs that indirectly received assistance due to their membership in one of the regional or departmental networks, such as ASECSA and SHARE. Overall, the

geographical areas covered by the PC partner organizations included the departments of Chimaltenango, Sololá, San Marcos, Totonicapán, Quetzaltenango, Huehuetenango, Quiché and Jalapa.

Annex 5 of this report contains tables summarizing the approved, executed and amended budgets for partner NGOs between 1997 and 2001.

F. Technical Strengthening

The technical strengthening component of the NGO project focused on improving organizations' capacity to provide accessible and high quality R/CH services to rural families by: developing an effective IEC and health education strategy at the household level; training community health workers to provide quality services; implementing a monitoring system to ensure the quality of service delivery; and expanding the use of the reproductive health and IMCI algorithms.

During the course of the CA project, the PC provided technical and financial support through sub-grants to its partner organizations. In addition, PC assisted other non-partner organizations, such as INSARE, in the area of family planning and the use of the "Contraceptive Technology Handbook" book (Hatcher, *et al.*). The NGOs ACODIMAM, HOPE, CEIPA and AGROSALUD were assisted in training of trainers, CEIPA in sexual education, and ACODIMAM in the John Snow, International (JSI) Logistics Information Systems, SIAL.

The PC has trained all NGO partner organizations' directors and project managers in baseline and end-of-project evaluation methodologies. The PC also initiated discussions with APROFAM and other family planning methods suppliers, to facilitate NGOs' efforts to establish effective mechanisms through which to acquire methods after the termination of the CA with the Population Council.

Within the NGO Strengthening Project, Element II works towards strengthening the nine NGO grantees through six action steps, which are briefly explained in this section.

1. Technical Meetings and Workshops

The Training Needs Assessment revealed that the majority of NGO grantees needed training in FP and standardized integrated management of childhood illnesses. The PC therefore conducted a series of technical meetings, seminars and workshops for key NGO personnel. Among the titles of and topics addressed in the workshops were: Training of Trainers, "Improving the Health of Women and Children: Key Messages" (this workshop included a section on "Men as Partners"), and "Counseling as a Tool for Improving Quality of Services."

In addition, approximately four technical staff meetings were held with partner NGOs with the respective aims of: 1) presenting baseline results for the NGOs CDRO, IDEI, Renacimiento, and SHARE, 2) establishing links between primary medical distributors (who provide R/CH supplies) with NGO managers, 3) providing NGO staff (per their request) with further assistance on validation techniques for key health messages, and 4) training technical personnel from 2 NGOs (PIES de Occidente and IDEI) in the use of Epi Info. While all nine NGOs took part to

some extent in all of the above programs, each individual workshop and meeting involved the participation of four-five selected groups, depending on interest in the topic and appropriateness in meeting professional needs.

2. Technical Support to Individual NGOs

In addition to this technical assistance and training in the key areas of family planning, obstetric services and IMCI, the PC also trained the partner NGOs in methodologies for community mobilization, IEC, materials development, and adult education. It should be noted that each organization had its unique form of approaching the community and integrating their clinical services for community members; therefore, the organizations had differing levels of involvement and foci for advancement, and this diversity was taken into account throughout the entire Project.

Through the life of the project, the PC conducted various special studies with the partner NGOs, to introduce a subject or to strengthen some specific technical area. Following is a summary of these activities:

3. Special Training Projects

Breastfeeding and the Lactational Amenorrhea Method with La Leche League. During 1999, two workshops and various follow-up visits were completed with La Leche League of Guatemala (LLLG) and the PC partner NGOs as part of a contract in technical assistance.

The training and materials that LLLG distributed throughout Mayan communities were acceptable to and appreciated by the members of the partner NGOs. Key messages regarding exclusive breastfeeding, nutritional practices for weaning, and the LAM method of birth spacing were included in counseling services offered to prenatal clients.

Small Grants from the Institute for Reproductive Health (IRH) at Georgetown School of Medicine. During the last quarter of 1998, the Georgetown University Institute for Reproductive Health (IRH) presented a call for proposals for a small funds program to introduce and mainstream natural FP methods. The PC assisted APROVIME and CDRO (both Council partners) in presenting a concept paper for co-developing a RH project in Totonicapán, which was accepted to receive funding from IRH. This project included the development of an integrated strategy for promoting natural methods: (a) breastfeeding (LAM), (b) “interval method” (between the exclusive breastfeeding period and before the return of a regular menstruation cycle), and (c) the “Blanket Rule” Rhythm Method, which has been an effective and widely-accepted method among indigenous women (see Element I section for partial results of related operations research). The IRH provided the necessary technical assistance, funding and support for project design, data analysis and potential dissemination of the strategy. The PC provided supervisory support to ensure the successful development of the project.

Training in IMCI for Health Providers at the Clinic Level. A total of 15 doctors and three professional nurses were trained to become responsible for the implementation of IMCI

protocols in their respective institutions. Participating organizations were: Association Renacimiento, SHARE-Guatemala, ASECSA, Rxiin Tinamet, and PIES de Occidente.

The training course for facilitators was carried out in three parts: (1) theory, (2) practice, and (3) in-service training and supervision. Theoretical training employed the instruments of WHO/PAHO, which were adapted to the health care standards of Guatemala. Clinical record sheets and registration/monitoring forms were produced prior to the training, and a monitoring system for in-service supervision was developed.

The theoretical seminar made use of various materials, including clinical recording forms, watches for counting respiratory frequency, medicines, and audiovisual equipment such as videocassettes produced by WHO/PAHO. The nine training modules used were: (a) Introduction, (b) Evaluation and classification of the child two months to four years of age, (c) Selection of treatment, (d) Implementation of treatment, (e) Evaluation and classification of the child one week to two months of age, (f) Counseling for the mother or accompanying adult, (g) Follow-up care, (h) Procedural tables, and (i) Ill children photographs.

Written exams were given both prior to and following the theoretical training. At training end, a definite improvement was noted among participants; the post-test average was 96 points as compared to the pre-test average of 35 points. This theoretical course can be completed in eight days, but it was always to be followed by a supervised practical training phase as a necessary step in the introduction of the IMCI methodology.

The practice was conducted in hospital outpatient examination rooms, emergency facilities, reception areas, and postpartum wards. Participants were able to “practice” techniques on patients, and performance monitoring instruments were used throughout.

The final supervision phase was conducted in NGO facilities and continued throughout the remainder of the year at approximately two-month intervals.

Adaptation and testing of the IMCI Strategy at the Community Level (IMCI-C), and Training in IMCI and IMCI-C. PAHO/WHO, UNICEF and USAID have recently proposed and implemented a joint strategy for the integrated management of the principal childhood illnesses (IMCI) with the aim of improving the quality of infant and child care. The main purpose of the IMCI-C operations research was to provide lower level clinical health workers with skills to recognize and assess major signs and symptoms of illness in children, as well as to classify and establish the severity of the disease, and provide basic initial care and refer cases - when necessary - to the next level of care. Generally, in the case of non-severe illness, health workers are trained to provide treatment and counseling to the mother or caretaker for home care.

The IMCI-C adaptation was based on the PAHO/WHO’s strategy, with emphasis on diarrhea and pneumonia case management, immunizations, and nutritional practices. Key physicians and researchers with expertise in the field collaborated in this project, conducted courses for NGOs, and disseminated the monitoring section for IMCI and IMCI-C in NGO clinics and among community health workers. These activities are outlined in further detail in project final reports.

A total of eight partner institutions participated in the IMCI-C facilitators training, and five in the community staff training; by the end of the year, a total of 128 health workers had been trained.

Extending the use of Algorithms for integrated reproductive health care. The Council continued its efforts to introduce the Algorithm strategy throughout 1999 and to train NGO clinic staff in its use. The Algorithm has been an instrument of much interest to the clinical personnel of the NGOs and has worked well in the introduction of FP into service delivery.

Training and dissemination of the Autodiagnóstico methodology. During 1999, six partner NGOs initiated and carried out the *Autodiagnóstico* methodology in their target communities: IDEI, CDRO, PIES de Occidente, Renacimiento, SHARE and Rxiiin Tnamet. This methodology is described above under “Year two principal activities.”

Activities that took place in 2000 include:

Contraceptive technology training (modern and natural methods). Training in the use of “Contraceptive Technology Handbook” (Hatcher, *et al.*) took place during eight workshops attended by 85 technicians and 19 organizations (including SHARE’s cooperating institutions, and ASECESA’s partner programs). The Population Council technical team then visited each of the partner NGOs individually to monitor the use of the manuals.

Training in the “Necklace Method”. PC contracted APROVIME to carry out four training workshops on the necklace method, in coordination with Element II’s technical team. Seventy-five technicians from 29 NGOs (21 partners and eight non-partner organizations) participated. As a product of the training, each participating NGO developed plans for promoting the method using the guidelines developed by the PC. In July of 2000, NGOs began to provide information on the method as part of the overall FP methods available. NGOs obtained necklaces and IEC materials directly from APROVIME at 18.00 Quetzales; the price for users then ranged between Q20.00 and Q25.00. Throughout all of the workshops, a total of 154 technicians were trained.

Training in RH in Catemaco, Veracruz, with MEXFAM. Between May and July, 2000, two workshops were conducted in the MEXFAM training center in Catemaco, Veracruz (Mexico). In the first workshop, 18 technicians participated from Renacimiento and their six NGO network organizations: Chuwi Tinamit, Kaji jel, Tinamit Quicotit, Kotzijal María, Xilotepec and Candelaria. The participant evaluation indicated that the objectives were met given that three large interventions were incorporated into Renacimiento’s regular programs: family planning, sex education and obstetric case management.

The second workshop was held in June and July, 2002, and was attended by 19 participants from ten NGOs (nine PC partners and one invited NGO). The El Recuerdo Cooperative from San Pedro Pinula, Jalapa, was included as a partner NGO in this workshop. Also invited was the institution ADEMI from Santa Apolonia, Chimaltenango, which was not formally part of the CA, but had been receiving technical strengthening assistance from the Element II PC staff.

Sustainability Training

Workshop 1: A workshop on “Financial Self-sustainability” (FSS) was held in February of 2000, with the participation of all NGO partner organizations. The general objective was to build consciousness among participants with respect to the topic and to initiate the development of work plans to strengthening each participating institution. Issues discussed included: the importance of FSS for partner NGOs, cost studies and their management applications, how prices can contribute to improving institutional finances; and alternative strategies to generate income. The workshop also served to establish common definitions and concepts used in the FSS field. NGOs were encouraged to establish a price policy for their various services considering: users’ ability to pay, service costs, service performance, subsidy strategies, and self-sufficiency projections, and others.

Workshop 2: Following this first conference, a second workshop on sustainability was held in FEMAP, Ciudad Juárez, Chihuahua (México), for the partner-NGO Executive Directors. The Directors also visited the MEXFAM Offices, where the Director of the Catemaco Training Center assisted in the evaluation of results and lessons learned from the MEXFAM training for NGO technical staff.

The specific objectives of the second workshop were to: (a) Understand the mission, vision, and structural organization of the FEMAP network in order to incorporate selected elements into NGOs own programs; (b) Understand the sustainability strategies (successful and unsuccessful) of the FEMAP network; (c) Understand the managerial processes used by FEMAP within the sustainability strategies; and (d) Establish mechanisms for continued information exchange with FEMAP.

Several field visits were also organized in Ciudad Juárez to observe community banks, groups of sexual workers, factory workers, adolescent groups and the FEMAP Hospital.

Main Findings

Taking advantage of the NGO Directors’ visit, a meeting was held with MEXFAM to review accomplishments from the health staff trainings in Catemaco, Veracruz. An overall analysis of the training was conducted at the MEXFAM facilities in Mexico City. The following principal conclusions were drawn:

- Participating NGO Directors considered the inclusion of sustainability activities to be important for their organizations.
- The creation of a Federation of child and reproductive health organizations in Guatemala would be feasible.
- Strong emphasis should be given to the managerial development of the organizations.

Follow-up Activities

- The sustainability models used by FEMAP were reviewed to assess feasibility of adapting one or more for the participating NGOs;
- Training for the partner-NGOs' technical staff had been quite positive and had facilitated the institutionalization of the FP program within the organizations;
- A visit to Catemaco was organized and financed by partner NGO directors.

4. Educational Materials Development and Distribution: Training Modules

During year 2000 the following modules were developed and tested:

- “CAFE” or Training of Trainers;
- Family planning, based on workshops held both in Guatemala and in Mexico with MEXFAM. These first two modules served as models for subsequent trainings developed by the technical team and local consultants;
- *Autodiagnóstico*;
- Algorithm for the Integrated Delivery of Reproductive Health Services;
- The Necklace Method;
- IMCI and IMCI-C.

During year 2001 the following modules were developed:

- Sexual & Reproductive Education;
- Training on Monitoring and Evaluation;
- Information, Education and Communication;
- Integrated Logistics and Administration System;
- Management.

The above-mentioned educational materials are currently being used by the NGOs that partnered with the PC during the Cooperative Agreement. In addition, they have served in the program *Proyecto Calidad en Salud* (Project for Quality in Health), as a base for reproductive health materials to be used on a national level.

5. Information, Education, and Communication (IEC)

Due to the virtual absence of IEC as well as training and support materials among NGOs (as highlighted in the training needs assessment), the PC worked to design, revise and adapt existing materials and standardize their contents for all nine NGOs. During 1998-1999, several protocols and job aids were adapted and reproduced, and the majority of IEC materials were printed during the first quarter of 1999. Materials primarily focused on IMCI, management of obstetrical cases, and family planning. While none of the NGOs had any family planning IEC materials prior to this project, the PC helped to establish and disseminate standard materials to partner NGOs; however, these materials reached several other organizations throughout the country.

Based on collaboration with the IEC inter-agency group formed between Development Associates and USAID, PC worked with partner organizations in the following activities:

- IEC processes and how to apply lessons learned within institutions;
- Design and validation of IEC materials, including a photographic calendar designed to promote the participation of men in birth spacing;
- Formal and informal communication channels in rural Mayan communities: selected NGOs conducted a study on this topic, in order to provide input for the translation of key messages into Mayan languages. One important finding of the study was the need to standardize the messages in Spanish first and then into different Mayan languages.

During 2001, NGO partners participated in a final workshop based on the IEC Strategic Plan for the FP component of the MOH RH program. The PC provided technical assistance for the strategic design of IEC materials, and NGOs developed individual strategic plans, which they then began to implement. This activity included the production of radio spots, as well IEC materials distribution and in-service training.

Through this process, the IEC and sexual education modules were validated and the necessary changes were incorporated; modules for IEC materials are summarized below:

Table 4. IEC Modules for Family Planning, Self Evaluation (*Autodiagnostico*), IMCI, and Management of Obstetrical Cases

Family Planning

Material	Description of Material	Users
Community-based informational guide to FP methods	68-page black and white illustrated manual providing easy to read information on family planning	All potential family planning clients who seek services individually or as couples
Guide to family planning methods for supervisors	112-page black and white illustrated manual providing detailed information on FP	All supervisors at the clinical and community level
Brochure on birth spacing	19 color pages illustrating different methods of family planning	All potential FP clients who seek services individually or as couples, both during physician, nurse and midwife consultations, as well as during household visits carried out by community personnel
Family planning methods pamphlets	Nine illustrated color pamphlets (one per method) containing information on each method	Corresponding pamphlet to be given to the individual or couple who has decided to use a specific method
Brochure on family planning	Eight color panels with information on each family planning method classified by type of user	Clients who have not yet decided on a method, need time to consult or consider decision, or do not

		currently want to use a method
Poster on family planning	Color poster illustrating each FP method and classified by type of user	Women and men of reproductive age who visit clinics, maternity wards and/or community-based health posts
Large poster of female organs	Depicts female organs for use in sexual education and family planning	Service and community personnel being trained in the female reproductive cycle
NFP training manual	Comprehensive training manual on all NFP methods (from Georgetown University Institute of Reproductive Health)	Project managers

Self-Evaluation (*Autodiagnóstico*)

Material	Description of material	Users
General guide to <i>Autodiagnóstico</i>	Guide describing the <i>Autodiagnóstico</i> process	<i>Autodiagnóstico</i> facilitators
Detailed guide to <i>Autodiagnóstico</i>	A step-by-step guide to each of the <i>Autodiagnóstico</i> stages	<i>Autodiagnóstico</i> facilitators
Poster depicting major RH problems	Illustrated figures designed to address and identify major RH problems	<i>Autodiagnóstico</i> participants
30-piece picture sets	Includes RH themes to use in <i>Autodiagnóstico</i> sessions	<i>Autodiagnóstico</i> participants

Integrated Management of Childhood Illness

Material	Description of material	Users
WHO/PAHO IMCI protocols	Protocols for the standard case management of childhood illnesses, based on PAHO/WHO and BASICS project manuals	All clinical personnel and services providing child health services
IMCI IEC materials	IMCI IEC materials developed and produced by BASICS, for follow-up use in their activities in Guatemala	All clinic and health service personnel

Management of Obstetrical Cases

Material	Description of material	Users
Obstetric management protocols	Obstetric management protocols for health centers and health posts; produced in conjunction with the MotherCare project.	All clinical personnel (physicians, nurses, auxiliary nurses) and clinics that attend deliveries

A variety of support materials also accompanied these modules. Materials for the *Autodiagnóstico* module included 30 color laminated drawings, a vinyl poster depicting these drawings, and a facilitator's guide. The IMCI module included posters with images representing integrated care for the most prevalent childhood illness, a 49-page manual and a 16-page flipchart. Material development for these two modules began in February of 1999. Validation, which took place in Quetzaltenango with the NGOs CDRO and Pies de Occidente, was supervised by the PC technical group. Subsequent revisions were conducted with 23 community health agents, and a total of 15 internal revisions took place prior to the final printing in the first trimester of 2000.

Support materials specific to the necklace method included a 14-page flipchart containing instructions for couples, a written guide to utilizing the method and two posters which were to serve as a base for creating interactive visual aids for couples to use to learn about the method. These materials were validated by the NGO APROVIME and the final versions printed in January of 2000. Finally, educational materials for the FP module consisted of an extensive instructional folder for midwives containing samples of methods and several pages of colored cut-outs to use when counseling couples. These materials were pre-validated with midwives in 1998; the designs were then based on drawings by the midwives themselves. The folder was modified in 1999, validated once more and then printed in its final form. Additional materials for the family planning module included: an instructional flipchart, nine brochures describing each method, one color brochure and one color poster describing all methods, a supervisor's guide and community guide. Annex 6 contains tables outlining the educational materials distributed by the PC to both NGO partners and other collaborating institutions between 1998 and 2001.

6. Logistics and Management Training

Considering that none of the partner NGOs offered family planning services prior to 1998, the PC saw logistics and management training as a crucial step in preparing them for the technical as well as administrative aspects of this new service component. The training was designed for both voluntary and technical staff within the NGOs and included instruction in the SIAL system, which would allow organizations to develop efficient systems for the acquisition, storage and distribution of family planning methods.

Logistics Activities

1998: In April of 1998, the PC organized a technical reunion to facilitate contact between NGO grantees and selected principal suppliers of family planning and child health medical products. Participants included managers and administrators of the nine NGO grantees and technical personnel from USAID, LAPROMED and PROAM (Access to Essential Medicines Program). USAID took on the role of sharing family planning distribution methods, and the other two organizations took the lead in offering information on essential medicines.

1999: Prior to the delivery of family planning methods to the partner NGOs, the SIAL was institutionalized. The initiation of this process began with a workshop designed for the technical personnel of Element II and the administrative personnel of the partner NGOs. Participants included: ASECSA, Renacimiento, Rxiin Tnamet, CDRO, Pies de Occidente, IDEI, Belejeb

Batz, and SHARE with six of their cooperating institutions. The workshop was conducted with the support of the resident consultant of JSI. By the conclusion of the CA, the logistical system was in place in all NGOs participating in the PC program.

A distribution system for family planning methods was jointly defined by APROFAM, USAID, JSI, and the Population Council. It was determined that APROFAM would be in charge of customs procedures and delivery to the PC that, in turn, was to reimburse APROFAM for any processing fees incurred, and also oversee the distribution of methods to their partner NGOs.

2000: Primary activities during 2000 consisted of monitoring visits to each NGO project to assist project managers in implementing the logistics information system, which included a FP methods inventory, details on requisition process, storage conditions, kardex, and users' registration data. The logistics system was updated in April 2000 by JSI personnel.

In December 2000, an Action Plan was presented to USAID and later implemented for the management and control of contraceptives among PC partner NGOs. As part of this plan, the correct application of the logistics information system that is periodically conducted by the PC technical team was monitored. In the first semester, the PC aimed to conduct a more exhaustive monitoring procedure, and a private consultant was called in to assist in monitoring SIAL application within each of the partner NGOs. The results obtained led to several corrective actions to improve system administration.

Microsoft Access was used to design and implement an inventory program for family planning methods. This system complements the SIAL and allows for greater control over the administration of FP methods by both the PC and the partner NGOs.

2001: During the last year of the project, a study was planned to determine the most effective distribution channel for family planning methods for partner NGOs to guide intervention efforts after 2002. However, the study was not carried out due to USAID's decision to make APROFAM principally responsible for all aspects of distribution of contraceptives donated by USAID to NGOs. In order to ensure sustainability of the acquisition and supply system in place, several coordination activities were carried out with IPROFASA and UNFPA. In April, IPROFASA presented the partner NGOs with the complete line of products that they offer and agreed to visit each organization and to integrate NGOs into their potential client lists. IPROFASA is seen as a potential provider of *Cyclofem* after 2002.

Management Training

In order to ensure high quality management of partner NGOs' projects and programs, the PC developed a minimum management package to be adapted to each NGO's level of organizational development. This training package incorporated several key areas specific to program management, including project planning, resource management, monitoring and evaluation, and institutional development. One of the long-term goals of training in these areas of program administration was to provide NGOs with the tools necessary to make informed and efficient decisions based on quality data within their respective programs.

1998: The PC supported management of all NGO grantees, with particular assistance to Belejeb Batz, CDRO, IDEI and Renacimiento.

Throughout 1998, a PC management specialist visited NGO managers to discuss the progress of their projects and make any necessary adjustments. The software package MS-Project was used to devise a quarterly reporting and planning form for the NGOs. In addition to other program features, this database included a timeline of project activities, as well as future projections and output information for planning based on the level of effort of personnel. In addition, MS Project can generate blank planning charts which NGO managers fill out as activities are accomplished.

NGOs were requested to focus on outputs concerning activities such as health care agents training, number of training and educational activities in the community, and development of materials. By the end of 1998, the Council requested NGOs to report on population-based indicators, which were gradually incorporated into the NGO projects progress reports.

1999: During 1999, PC worked primarily in the design and validation of administrative procedures with the partner NGOs. This process began with a diagnostic organizational study of the three partner NGOs Renacimiento, the Health Program of CDRO, and Pies de Occidente. In addition, prior to this study, the Manual of Organization and Operations was designed and validated. All technical and administrative personnel from the three organizations participated in this training in the four elements of the Minimum Management Package (which outlined areas of logistics, strategic planning, health information system, and norms and procedures).

2000: The PC's partner NGOs planned year 2000 activities using MS Project. Thirty-eight technical staff members were trained during seven sessions. These one-day meetings covered the following topics: health service quality process; the administrative process for RH and FP services; organization, planning, programming, monitoring, and evaluation; introduction to MS Project; and development of year 2000 action plans.

2001: PC continued monitoring activities with the support of the technical team and assisted partner NGOs in managing and operationalizing the MS Project as a tool for planning, programming, and follow-up activities. All partner NGOs developed respective plans using the MS Project and periodically monitored progress toward meeting their project objectives.

Accounting

The PC identified an accounting program that was appropriate to the needs of the partner NGOs, and during the second semester of 1999 the program was validated in Pies de Occidente. Due to its proven usability and applicability, this program was installed and integrated in the accounting departments of at least four other NGOs during the following year (2000).

In the year 2000, a computerized accounting system was adapted for all NGOs based on the software package Access. The purpose of this database was to allow partner NGOs to follow up and report on projects under the CA with the Council. By the end of the project, all nine NGOs

had implemented the system, and the NGO Networks had begun to expand the system for their entire organization's financial management.

G. Development of the First Guatemalan NGO RH “Umbrella Organization”

In October 2001, all PC NGOs and NGO Network partners formally joined together, creating the first “umbrella organization,” of NGOs and NGO networks working on reproductive and child health in Guatemala, with the formal title in Spanish “*Federación de Organizaciones en Salud Infantil y Salud Reproductiva de Guatemala*” (Federation of Child and Reproductive Health Organizations in Guatemala, FESIRGUA). The umbrella organization has formal affiliations with other similarly-structured organizations and associations, such as “*Instancia de Salud Nacional*” (National Health Forum), though all of the member organizations in Guatemala are linked to the department-level MOH, health centres and district hospitals by means of referrals and logistics systems. They also received funding from several other sources apart from PC-USAID.

The FESIRGUA is the first organization of its kind in Guatemala and represents a definite step forward in the field of R/CH in the country, particularly in its distinct focus on rural and indigenous populations. The main functions of FESIRGUA are:

- To improve health conditions of the mostly rural communities of the Guatemalan Altiplano through health services, health education and promotion, and delivery of integrated services;
- To improve access to quality reproductive health services;
- To improve community participation and mobilization through the *Autodiagnóstico* methodology;
- To promote the social and economic advancement of rural women;
- To train health personnel, including CHWs, TBAs and traditional healers;
- To promote the means for self-reliance among low income families.

H. End of Project Assessment of Nine NGOs and NGO Networks Projects, and Impact Evaluation of Four NGOs and NGO Networks Projects

1. Introduction⁵

In 1997, the first four NGO projects to receive funds from the Population Council carried out baseline studies in five departments of Guatemala, using a standardized questionnaire developed by the Population Council. The PC also assisted them to adapt and standardize the instrument, to train supervisors and interviewers in administering it, and to train NGO staff to tabulate, analyze, and use the results for modifying and improving the NGOs' project strategies. The chosen methodology was a cross-sectional study. The participating NGOs were CDRO, IDEI, Proyecto Renacimiento, and SHARE de Guatemala. In 1998-1999, five new NGOs initiated projects with the Population

⁵ This section was drawn from: End of Project Information of Nine NGOs And NGO Networks Projects, and Impact Evaluation of Four NGOs And NGO Networks Projects in the Guatemalan Altiplano Final Report. M. Castrillo and M. Silva. The Population Council, November 2001.

Council, bringing the total number of sub-awards to nine, divided between six individual NGO projects and three NGO networks.

In 2001, the last year of the NGO Strengthening project, all NGOs and NGO networks carried out a final evaluation of their projects with the Population Council, using the same standardized questionnaire to measure attainments and impact from Element II. The present document presents results from the end-of-project evaluation of the nine sub-awardees, as well as a results comparison between baseline and end-of-project evaluations of the four NGOs who carried out the first baseline study.

2. Study Methodology

Study Population. The PC's partner NGOs and NGO networks included Renacimiento (along with Red Kaqchikel and seven NGO associates), Belejeb Baatz, PIES de Occidente, IDEI, CDRO, SHARE, Rxiin Tinamet, ASECSA, and El Recuerdo. Only the first four NGOs (Renacimiento, IDEI, CDRO and SHARE) participated in the baseline survey. However, all nine partner NGOs participated in the end-of-project study, resulting in a much larger sample size which covered more regions than had been included in the baseline survey. A descriptive analysis of end-of-project data is also presented to describe the status of primary health indicators for the target population. However, to evaluate project outcomes and impact, a comparative (pre-post) analysis was conducted using only data from the four NGOs that participated in the baseline study.

Tables outlining the project start and end dates for all nine NGOs, as well as the target populations that each organization served, are included in Annex 7.

Sampling

Each NGO selected a sample population of 210 respondents for the household-level questionnaire, based on the following criteria:

- Mothers of children under 24 months of age;
- WHO 30-Cluster Study, where $p=0.5$, $d=0.1$ and $z=95\%$ (Henderson, *et al.*, 1982);
- Communities included in NGOs coverage area;
- Random cluster design to select households.

The principal R/CH interventions the Population Council committed to introduce and expand were: immunizations (EPI), pneumonia and diarrhea case management, breastfeeding and nutritional practices, sexual education, family planning, care during pregnancy, delivery and postpartum, early detection of cervical and breast cancer, and prevention and treatment of STIs, including HIV/AIDS. Also included were selected issues that cut across all intervention areas, such as gender roles, community participation and mobilization, and others. The selected study population (mothers/women of reproductive age and children under two) was considered appropriate in that the range of themes under study were for the most part applicable to these two groups; the household-level study did not, however, include information on males and

adolescents. Following is a list of the health interventions selected for the final evaluation; next to each intervention is the corresponding target population.

- Immunizations (EPI): Caretakers of children 12-23 months of age;
- Pneumonia and Diarrhea Case Management: Caretakers of children 0-59 months of age (emphasis on under two months);
- Breastfeeding and Nutritional Practices: Caretakers of infants 0-23 months of age;
- Sexual Education: Women and men of reproductive age; school-age girls and boys;
- Family Planning: Women and men of reproductive age;
- Care During Pregnancy, Delivery and Postpartum: Women and men of reproductive age;
- Early Detection of Cervical and Breast Cancer: Women above age 35;
- Sexually Transmitted Diseases: Sexually active women and men.

The final evaluation study for the NGO project provides information on indicators expressed in rates and percentages to measure attainments of project interventions, identify the impacts of health messages on target populations, and to measure progress and achievements with respect to baseline data. Certain study populations overlapped between the maternal and child health interventions. In order to simplify the household level study and to ensure that it would respond adequately to the needs of NGO projects, the PC selected a population of mothers of infants under 24 months for the interviews, which would provide the widest overlap across interventions. The present report presents a comparison of results for the baseline and final evaluations carried out by the four NGOs, as well as the end-of-project results for all nine NGOs that received sub-awards from PC.

Data Collection and Study Design. Each of the nine partner NGOs conducted individual studies at the end of the project with the support and supervision of PC staff. Each NGO research team consisted of a study coordinator, supervisors, interviewers, and a PC staff member who served as technical support. The interviewers were Mayan women who spoke both Spanish and a Mayan dialect fluently. Interviewers wore traditional dress and were thus considered to be bi-lingual and bi-cultural.

The present study consists of a quasi-experimental, one-group pretest-posttest design, with independent samples. Baseline data was collected in November and December of 1997. End-of-project data was collected in August of 2001. Data was entered individually by staff members of partner NGOs, using Epi Info version 6. After entering the data sets from individual partner NGOs, SPSS version 10 was used to analyze the data.

Survey Questionnaire. The questionnaire was developed with the aim of obtaining information from both mothers of children under 24 months of age as well as CHWs. The standardized study questionnaire was developed by the PC with assistance from local and international experts on specific intervention areas. The final individual questionnaires were standardized with help from NGO partners in an effort to make them applicable to all project interventions and areas being studied (see Annex 8 for the standard questionnaire).

The first questionnaire administered at the household level was translated into several Mayan languages. The questions were printed in both Spanish and a Mayan language so interviewers could choose what language to use at the time of the interview.

3. Results and Comments

As explained in earlier sections, the end-of-project survey population consisted of sample populations from the nine partner NGOs and NGO networks projects carried out in collaboration with the PC, of which four conducted the standardized baseline study in 1997. A small number of differences were found when comparing results for selected indicators from the four NGOs that participated in the baseline survey and the five NGOs that did not participate, among them: women's ethnic composition and women's perceived difficulty of getting pregnant again. However, this first section describes the results from the end-of-study population (i.e. all nine NGOs together) in order to provide an overall description of the health situation of the partner NGO's target population.

Table 5: Summary of the Main Results of the End-of-Project Cross Sectional Study

Indicators	Percent	Total Number
Basic demographic characteristics of the sample population		
Average age (<i>continuous variable</i>)	27.0	
Mayan origin	84.8%	1,981
Completion of at least primary level education	14.6	1,981
School attendance	60.4%	1,981
Birth spacing methods: utilization and attitudes		
Non-pregnant women currently using contraception	16.1%	1,700
Non-pregnant women reporting to <i>not</i> want another child in next 2 years	53.9%	1,700
Of the women who did not want another child in the next two years, those currently using a birth spacing method	20.1%	916
Women who agree with the use of birth spacing methods	61.3%	1,891
Correct knowledge of the most fertile period in a woman's cycle	10.1%	1,891
Women using a natural method who correctly reported the most fertile period in a woman's cycle	19.1%	136
Prenatal care		
Women who had prenatal exams in last pregnancy	79.7%	1,891
Received TT vaccine during pregnancy	66.5%	1,891
Delivery attended by health professional	15.3%	1,891
Immunization: access and knowledge		
Mothers who reported having immunized their children at least once	83.2%	1,891
Mothers correctly reporting when infants need measles vaccine	25.5%	1,891
3 OPV vaccinations for children 12-23 months (according to vacc. card)	44.3%	938
3 DPT vaccinations for children 12-23 months (according to vacc. card)	44.8%	938
Measles vaccination for children 12-23 months (according to vacc. card)	31.3%	938
BCG vaccination of children 12-23 months (according to vacc. card)	52.3%	938
Breastfeeding practices		

Indicators	Percent	Total Number
Women who breastfed within the first hour postpartum	57.2%	1,891
Children < 6 months of age exclusively breast-fed	52.7%	480
Infants between 6-12 months of age receiving solid or semisolid foods	80.3%	361
Control of diarrheal diseases in children under 24 months of age		
Children with diarrhea who received the same amount or more fluids ⁶	65.1%	645
Children with diarrhea who received the same amount or more foods ¹	31.3%	645
Children with diarrhea who were treated with ORS	25.1%	736
Pneumonia control in children under 24 months: usage and performance of health services		
Mothers who sought help for pneumonia compatible symptoms (fast breathing or chest in-drawing)	74.4%	426
Mothers who took children to a health professional (multiple responses) when showed pneumonia-compatible symptoms	72.9%	317
Mothers who knew at least 1 sign of pneumonia compatible symptoms (fast breathing and chest in-drawing)	39.7%	1,891
Percentage of population reached by IEC channels or materials		
Women exposed to at least one source of IEC	60.2	1,891
Women's participation in community activities		
Women who are aware of community groups or organizations working in health and development	46.0%	1,891
Women who participate in community organizations or groups working in health and development	41.4%	870

The survey results revealed relatively low levels of knowledge and use of contraceptive methods among women interviewed. Although the majority of women reported not wanting a child in the next two years, only one in five (20%) were taking measures to prevent a pregnancy. Women's knowledge of their own reproductive cycle is inadequate, even among those using a natural family planning method who thus lack the information necessary to appropriately protect themselves. In addition, a substantial percentage of women perceived selected contraceptive methods as potentially harmful to their health; these relatively widely-held negative perceptions around contraception represent one of the major barriers to reproductive health and family planning service provision in Guatemala. Finally, survey responses also revealed a limited level of involvement among women with community organizations or activities. Reasons for this relatively low participation should be further explored.

Indicators of treatment-seeking behavior were quite positive. In general, close to 70% of women sought some type of treatment or preventive health service, such as treatment for a severe childhood illness or prenatal care. With respect to maternal health and delivery attendance, more than 70% of women reported having had TBAs cut the umbilical cord after their last delivery. The large majority of pregnant women who had experienced complications during pregnancy or childbirth also sought treatment with a TBA. Among this population, it is clear that traditional birth attendants are key players in improving women's health outcomes.

In the area of child health, a very low immunization coverage rate was found, particularly for the measles vaccine (31.3%). A large majority of children between one and two years of age were

⁶ Children exclusively breastfed were removed from denominator.

not completely immunized. Breastfeeding practices, however, were found to be more adequate and in line with WHO recommendations.⁷

Mother's knowledge of danger signs indicating that the child must be taken for treatment was poor for diarrheal and pneumonia, both potentially serious and life-threatening infections. However, the proportion of mothers that sought medical care in general (74.4%) and with a health professional (75%) were high. Also, of those mothers who did seek treatment for their child's illnesses, the majority reported an adequate level of quality of care received.

The indicators measured and described above demonstrate several shortcomings both in overall health status and in the provision of health services among this population. Compared with national DHS figures from 1998/1999,⁸ the partner NGO's surveyed population was found to be largely underserved in many important MCH indicators. However, the most staggering differences can be observed for child immunization figures. While the national averages for complete immunization coverage were almost 60%, coverage for partner NGO's surveyed population did not even reach 30%. Similarly, national DHS figures and findings of this study for use of contraceptives and knowledge of the ovulatory cycle help illustrate areas of great need in provision of quality health education and services.

4. Impact Evaluation Results for Four NGOs and NGO Network Projects

Table 6. Comparative Analysis among Four NGOs with Baseline and End-of-project Data

Indicators	Baseline Survey (Rena, IDEI, CDRO, SHARE)		End-of-Project Survey (Rena, IDEI, CDRO, SHARE)	
	Percent	Number	Percent	Number
Basic demographic characteristics of sample population				
Average age (<i>continuous variable</i>)	28.2 (n=839)		27.2 (n=841)	
Mayan origin	97.0%	839	97.7%	841
Completion of at least primary level education	11.5%	839	18.3%*	841
School attendance	45.9%	839	66.2%*	841
Birth spacing methods – utilization and attitudes				
Non-pregnant women currently using contraception	7.8%	759	18.3%*	764
Non-pregnant women reporting to <i>not</i> want a child in next 2 years	38.9%	759	54.1%*	764
Of the women who did not want another child in the next two years, those currently using a birth spacing method	10.5%	294	23.5%*	413
Women who agree with the use of birth spacing	42.0%	839	64.9%*	841

⁷ To increase the likelihood of positive child health outcomes, the WHO recommends prompt initiation and exclusive breastfeeding until the sixth month and introduction of solid and semisolid foods thereafter, with continued breastfeeding until the infant is two or more years of age. See: "WHO Infant-Feeding Recommendation" (Update, May 2000).

⁸ <http://www.measuredhs.com/data>

	Baseline Survey (Rena, IDEI, CDRO, SHARE)		End-of-Project Survey (Rena, IDEI, CDRO, SHARE)	
Indicators	Percent	Number	Percent	Number
methods				
Correct knowledge of the most fertile period in a woman's cycle	8.1%	839	14.5%*	841
Women using a natural method who correctly reported the most fertile period in a woman's cycle	23.1%	39	26.8%	71
Prenatal care				
Women who had prenatal exams in last pregnancy	69.6%	839	83.1%*	841
Received TT vaccine during pregnancy	59.6%	839	65.6%***	841
Delivery attended by health professional				
Immunization: access and knowledge				
Mothers who reported having immunized their children at least once	79.6%	839	82.8%	841
Mothers correctly reporting when infants need measles vaccine	29.2%	839	29.0%	841
Breastfeeding practices				
Women who breastfed within the first hour postpartum	48.3%	839	56.0%**	841
Children < 6 months of age exclusively breastfed	48.8%	209	51.6%	217
Control of diarrheal diseases in children under 24 months of age				
Children with diarrhea who received the same amount or more fluids ⁹	59.5%	222	66.4%	286
Children with diarrhea who received the same amount or more foods	26.2%	222	25.9%	286
Children with diarrhea who were treated with ORS	17.8%	253	23.7%	325
Pneumonia control in children under 24 months of age: Use and perceptions of health services				
Mothers who sought help for pneumonia-compatible symptoms (fast breathing or chest indrawing)	62.0%	150	74.9%***	171
Women's participation in community activities				
Women aware of the existence of community groups or organizations working in health and development	35.4%	839	52.3%*	841
Women who participate in community organizations or groups working in health and development	64.0%	297	43.9%*	440

*p-value<0.000 (chi square)

**p-value<0.005

***p-value<0.05

In discussing the main findings and conclusions drawn from the endline survey among the four NGOs, it is useful to distinguish between important direct project impacts, areas of mixed results, and intervention areas that were not changed significantly by the project. In the first category, it is clear from the endline figures that several key indicators of reproductive and child health were positively influenced during the project period. One of the most dramatic findings was the increase in acceptance of family planning for birth spacing purposes among women with children under two. A greater percentage of this population also reported to not want a child in

⁹ Children exclusively breastfed were removed from denominator.

the next two years and to be using some type of birth spacing method. In addition, a larger proportion of women in the endline survey believed that becoming pregnant again would be easy to moderately difficult. These indicators suggest that women are both more aware of their fertility and are better equipped to prevent an unplanned pregnancy.

As shown below in Table 7, an interesting related finding is the tripling in the percentage of women using Depo-Provera during the project period. Given that all methods were promoted in a similar manner by the NGO programs, a possible explanation for this occurrence is that the advantages offered by this method more directly matched the needs of the population, such as the discrete and single dose of the injection, the relative inexpensiveness, and the time span of protection offered.

Table 7. Attitudes about Birth Spacing Methods: Comparative Analysis of Four NGOs and NGO Networks

Indicators	Baseline Survey (Rena, IDEI, CDRO, SHARE)		End of Project Survey (Rena, IDEI, CDRO, SHARE)	
	%	n	%	n
Type of method used by women who not wanting another child in next two years and currently using contraception¹⁰				
Natural family planning methods (NFP)	56.7	30	45.4	97
Oral contraceptives	10.0		8.2	
Depo-Provera	10.0		34.0*	
Tubal ligation	16.7		7.2	
Condom	0.0		9.7	
Lactational amenorrhea method (LAM)	6.7		2.1	
Vaginal Suppository	3.3		1.0	
Vasectomy	0.0		0.0	
Intrauterine Device (IUD)	0.0		1.0	
Others	6.7		3.1	

* p-value<0.000

Findings in the area of care during pregnancy, delivery and postpartum also reveal positive outcomes correlated with project activities. Percentages of women seeking prenatal care and receiving tetanus vaccines increased significantly during the project period. In addition, the proportion of women seeking assistance from trained personnel during delivery and birth is clearly increasing, as indicated by the smaller proportion of women who reported that a TBA cut the umbilical cord after birth and a larger number having had the cord cut by a trained professional. This finding also applies to women's treatment-seeking behavior in the case of pregnancy/birth complications, with a significantly larger percentage of women seeking help in a hospital and fewer women going to a TBA.

¹⁰ Multiple response questions were recalculated for baseline data in order to assure same methodology

The apparent shift from TBA use to assistance from trained health professionals in the case of maternal health care and emergency complications represents a major success in improving women's reproductive health outcomes. Experts in the field largely agree that maternal mortality due to complications during delivery and birth can best be prevented in hospitals, assuming they are equipped with the material and human resources necessary to respond rapidly to these complications (McCarthy and Maine, 1992). Traditional birth attendants or unspecialized personnel at large generally lack the skills or the equipment necessary to save a woman's life when presented with an emergency situation.

Finally, a third positive change resulting from the project is the proportion of women who are aware of the presence of partner NGOs as organized groups in their communities, which increased significantly during the project period and represents an important indicator of NGOs' active local role. More specifically, although before the intervention NGO clinics and their community promoters were rarely identified as service providers or distributors of contraceptive methods, by the end of the project a greater percentage of women had come to know groups working in their communities, and more women have sought health services in their facilities. Despite this fact, participation with NGO groups is actually lower than it was during the baseline study. It is difficult to determine explanations for this rather surprising finding from available data, and further consideration should be given to women's reasons for not participating in NGO outreach activities and groups.

One of the findings that showed mixed results in the end-of-project survey was in the area of integrated management of childhood illnesses. Of note is the fact that, in general, the percentage of mothers seeking treatment for their child's illness increased even more than the percentage seeking treatment for their own illness. It is possible to speculate here that mothers often give greater priority to their children's illnesses than to their own. However, a more accurate explanation might be that partner NGOs' programs have primarily focused on the identification and management of potentially dangerous childhood illnesses rather than adult illnesses. Women's health initiatives within this project, therefore, have been somewhat limited to primarily preventive measures and to those pertaining to spacing of births.

In the area of IMCI, a statistically significant increase was found in knowledge of danger signs for both severe diarrhea and lower respiratory illnesses. However, it is interesting that while treatment-seeking behavior for diarrheal diseases did *not* increase, more mothers were in fact seeking treatment for their children's lower respiratory illnesses. One of several possible explanations is that events of diarrheal infections in infants are considered less life threatening and severe by mothers than lower respiratory infections, especially when a child is kept hydrated (at home). A large majority of mothers whose children had been ill with diarrhea reported giving them the same or more fluids, thus providing appropriate care without seeking a health care provider or facility. Severe respiratory illnesses, however, are usually not manageable by the caretaker alone and require professional treatment, and programmatic efforts likely emphasized this.

Finally, the primary intervention area that did not show significant change in the end-of-project survey relates to women's perceptions of the safety of specific contraceptive methods. Despite

the significant increase in contraceptive use and the improved attitudes towards birth spacing in general, there was no improvement in percentages of women perceiving selected methods as safe to use. Moreover, percentages of women perceiving condoms, oral contraceptives and Depo-Provera as harmful actually increased during the project period. This finding implies that many popular beliefs and myths surrounding these methods have not been dispelled by partner NGOs' IEC efforts. It is important to bear in mind, however, that longstanding beliefs are difficult to influence during the life of a relatively short project; rather, collective and continued efforts are necessary to improve women's perceptions of the safety of contraceptive methods. These efforts should of course focus on improving women's and men's overall knowledge of different methods and their respective advantages and disadvantages, in order to better equip them with knowledge to make informed decisions that meet their own reproductive needs and goals.

Overall, it can be concluded that although the true impact of the project on selected areas is difficult to assess under the present study design, it is clear that the programs carried out by the PC's partner NGOs during this project have contributed to the improvement of several critical reproductive and child health outcomes at the population level, albeit in a context in which there remains significant room for improvement.

Results, indicators and benchmarks for Element II are included in Annex 9.

REPORT 1.

POPULATION COUNCIL OPERATIONS RESEARCH REPORT

TITLE:	Institutionalization of Service Delivery Improvement Strategies: A Distance Learning Program
MANAGING INSTITUTION:	The Population Council
IMPLEMENTING INSTITUTIONS:	School of Medical Sciences, University of San Carlos and Ministry of Public Health and Social Assistance
COUNTRY:	Guatemala
PC STAFF RESPONSIBLE:	Carlos Brambila Population Council
PRINCIPAL INVESTIGATORS:	Felipe Antonio López The Population Council Dr. Julio García Colindres Director. National Reproductive Health Program. MSPAS. Dr. Marco Vinicio Donis Professor. School of Medical Sciences, University of San Carlos
DURATION:	7 Months: (April 1 st , 2001- October 31 st , 2001)
REPORT DATE:	February 15, 2000

**Institutionalization of Service Delivery Improvement Strategies: A Distance
Learning Program
Population Council
Operations Research Report**

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**Institutionalization of Service Delivery Improvement Strategies:
A Distance Learning Program
Population Council
Operations Research Report**

Summary

The objective of this project was to develop, test and evaluate a distance learning program to provide Health District-level program managers with the necessary knowledge and tools to integrate, improve, increase, and make the reproductive health services they offer more efficient. Under this project, a training program was developed that enabled course participants to: (1) foster a positive attitudes towards reproductive health service provision, (2) implement changes aiming to make patient flow more effective, (3) provide integrated reproductive health services, (4) reduce medical barriers to family planning services.

This project was a collaborative effort between the National Reproductive Health Program of the Ministry of Health of Guatemala, the School of Medical Sciences of the University of San Carlos and the Population Council office in Guatemala. Program participants included 40 doctors and nurses from 20 Health Districts, randomly selected in four Health Areas. Activities were supervised by four 4 facilitators, which were MSPAS personnel from Health Areas. Participants were trained to lead District-level health teams, to make small-scale changes to improve reproductive health services provided at their work sites. The training program was conducted during a period of four months, including four units that were completed during one month each. Each unit had four components as follows: (1) self-assessment of the current situation with regards to the specific lesson topic, (2) selected readings, (3) put in practice use of job instruments to improve service provision, (4) self-evaluation of progress achieved during the lesson period. The core program included four lessons on the following topics: (1) core reproductive health messages, (2) service re-engineering, (3) systematic offering of reproductive health services and (4) increasing access to family planning information and services.

Evaluation results show that the intervention reduced the number of unnecessary contacts in 13 per cent, reduced waiting times in 11 per cent, and made more efficient the client-provider interaction time amongst experimental sites as compared to control sites. An analysis of completeness of reproductive health services received by clients shows that intervention sites almost doubled the number of relevant services provided to clients. The proportion of women who received family planning information increased from 8% to 19% amongst intervention districts, as compared to no change observed among control districts. The proportion of women receiving methods prior to discharge from the health facilities, increased from 12% to 36% as compared to no significant change observed amongst control districts.

This project provided an opportunity to integrate, systematize and consolidate more than one decade of programmatic research of the Guatemala Office of the Population Council.

This project integrated lessons learned in previous studies into a single systematic improvement program.

I. Introduction

In January 2001 the Ministry of Health of Guatemala released the first ever National Reproductive Health Program (NRHP/G). This program is a major turnabout in Guatemalan health policy. To be implemented at the service level, the new policy still requires guidelines, job instruments and operational procedures. To satisfy this need, the NRHP/G requested assistance from the Population Council to develop, test and evaluate a training program directed to managers of primary Health Districts. Health Districts are administrative units that include a Health Center (rural and semi-urban clinics operated by a doctor, a nurse and support staff), plus an average of four Health Posts, operated by a Nurse Auxiliary. There are approximately 270 Health Centers nationwide. The NRHP/G also established the priority of training Health District Directors, on management of reproductive health programs.

The Population Council was able to respond to the NRHP/G interest, based on lessons learned from past operations research projects, that provide materials and job instruments that have proven effective to improve reproductive health service provision. These strategies render culturally appropriate procedures to recurrent service delivery problems in clinical settings. Three of the most relevant strategies that have been successfully tested are the following:

1. Re-engineering service organization
2. Providing integrated reproductive health services
3. Reducing barriers to family planning service delivery

Two obstacles that constraint the institutionalization of these strategies are the following:

1. Training on each instrument and strategy is intensive and participatory. This is to say that training on the use of each of these instruments requires at least two or three days of in-class instruction. In other words, training requires participants to be absent from their places of work for a substantial period of time.
2. The second problem is that each of the above instruments and strategies was tested on an individual basis and they have not yet been proven as an organized and systematic set of interventions. This is to say, they do not yet conform a service improvement program.

II. Research problem

The primary question that this research project seeks to answer is: how can the delivery of reproductive health services at the primary level of attention be improved in an efficient, prompt and low-cost manner?

III. Solution

The response to the above question is to develop a training program, that does not require health workers to leave their places of work for long periods, that solves each service problem in turn, that enable service providers to take initiatives to improve services and

that does not require substantial additional resources. The solution proposed to answer the above question is to develop a distance education program through which service providers may learn and put into practice service improvement strategies at their own workplaces.

To implement such solution it was necessary to join forces with the National Reproductive Health Program of the Ministry of Health of Guatemala and the Continuous Education Program of the Department of Medical Sciences of the University of San Carlos. The plan was to establish a Distance Learning Course on Management of Reproductive Health Programs that could teach Health District Directors: (a) how to use tools that improve service provision and (b) how to lead health teams in their respective districts to learn basic service improvement tools. Furthermore, the course should include motivational and attitudinal elements to encourage participants to establish a favorable environment to implement improvement strategies.

To implement this solution it was necessary to standardize key instruments and strategies that the Council has developed over the past years into a single format. The most adequate format to achieve national reach is a distance learning educational methodology in which participants can learn basic concepts to change service practices, self-evaluate their learning process and put proposed changes into practice. Furthermore, these strategies need to be tested as a complete set of interventions that, as a whole, solve recurrent service problems.

The course consisted of four main units, each lasting one month, as follows: (1) core reproductive health messages, (2) leadership for change: re-engineering service organization, (3) focusing on the client: how to provide integrated reproductive health services, (4) eliminating barriers to reproductive health services: how to determine the reproductive health services women need.

The distance learning methodology has the following advantages with respect to traditional educational approaches:

1. Overcomes geographic limitations, improving access for people who reside in the rural areas and in other distant urban centers.
2. Does not impose time constraints to each course topic, allowing the participant to learn at his or her own pace.
3. Promotes self-discipline and self-confidence.
4. Costs are reduced compared to other educational models.
5. Facilitates on-site resolution of work problems.

During the experimental course, the Population Council studied problems and obstacles in the institutionalization of the service improvement strategies and procedures included in the program.

IV. Objectives

The general purpose of this project was to help improve reproductive health services offered to Guatemalan women, specifically marginal women in indigenous areas, through strengthening the health units' capacity to improve organization, access and quality of currently provided health services.

The specific objective was to develop a distance education training program that provides program managers with the knowledge and tools necessary to integrate, improve, increase, and make the reproductive health services they offer more efficient.

V. Description of the intervention

1. Organization

A Technical Committee was responsible for program design, implementation and evaluation. This Committee included representatives of the Continuous Education Program of the School of Medical Sciences of the University of San Carlos of Guatemala, the Ministry of Public Health and Social Assistance, and the Population Council. The Technical Committee was also responsible of enforcing inter-institutional coordination both at the Central Headquarters (Central Coordinating Committee) and the local level (Health Areas).

2. Program objectives and purpose

The purpose of this program was to improve reproductive health knowledge of secondary level service providers and improve quality and access to reproductive health services provided at Health Centers and Posts.

The objective of the program was to increase the capacity of service providers to continuously improve reproductive health services offered.

The educational objectives of the program were to enable program managers to:

- 1) Foster positive attitudes towards reproductive health service provision
- 2) Implement changes aiming to make patient flow more effective
- 3) Provide integrated reproductive health services
- 4) Reduce medical barriers to family planning services.

3. Participants

The course was directed to Health District Directors and Nurses, who are the institutional staff responsible for the implementation of the NRGPG.

Course implementation and follow-up was conducted in collaboration with facilitators. Course facilitators were Health Area personnel responsible of providing participants with

all the necessary materials, guiding the review of each session and monitoring the actual implementation of activities recommended in each unit.

An average of four Health Districts from each of four Health Areas participated in the course. Including two workers per Health Center, there were 40 course participants and 4 facilitators.

4. Contents

The experimental course consisted of four main units, as follows:

- 1) Basic reproductive health messages.
- 2) Leadership for change: re-engineering reproductive health service provision.
- 3) Focusing on the client: how to provide integrated reproductive health services.
- 4) Eliminating barriers to reproductive health services: how to determine the reproductive health services of women.

Each unit attempted to solve one service problem at a time, used one core material or instrument and aimed to achieve a specific objective, as follows:

Problem	Unit contents	Instrument or material	Learning objective
Lack of knowledge of reproductive health contents	Basic messages of reproductive health	PC booklet: <i>Basic Messages of Reproductive Health</i>	Improve and update reproductive health knowledge or service providers
Long waiting times and many unnecessary pre and post-consultation contacts	Re-engineering patient flows	PC manual: <i>Re-ingenieria de los servicios de salud reproductiva</i>	Reduce waiting times, make patient flow more efficient attending more clients in the same time and with improved quality
Single-service medical visits	Integrated services	PC job instrument: <i>Algorithm to provide integrated services</i>	Reduced missed opportunities, provide integrated attention and promote other reproductive health services than family planning
Medical barriers to family planning services	Unmet need	PC job instrument: <i>Rapi-entrega</i> (instrument to provide methods upon women's request)	Reduce medical barriers and satisfy women's needs for contraceptive information and services

5. Educational methodology

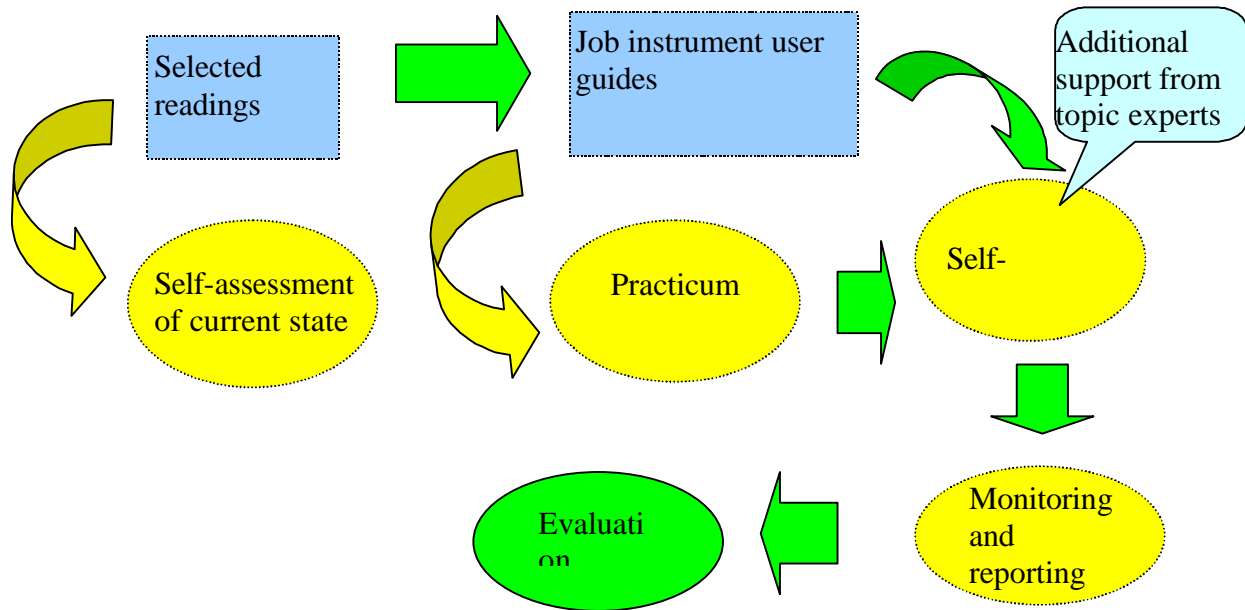
Each unit was designed to be completed during the course of one month. The facilitator met once per month with course participants to provide them with materials, and instruct them about activities to be conducted during the following weeks.

Each unit included the following components:

- 1) **Self-assessment.** Each monthly meeting was started with a self-assessment of the problems related to the lesson topic. For example, participants discussed what reproductive health services are offered at their districts? What is the quality of services offered? What are the main problems and obstacles to improve such services? How to improve access and quality?
- 2) **Selected readings.** Each unit included selected readings related to the main lesson's topic. Selected readings were 20-25 pages long, including only the most relevant aspects on the lesson's topic, plus recommended and suggested readings. At the end of each set of readings, the program included a set of questions that were collectively responded by participants to assess understanding of materials read.
- 3) **Practicum.** At the end of each meeting, course participants were instructed about activities to be conducted during the following weeks. For example, in Unit III which included a job instrument to systematically offer reproductive health services, the monthly task was to put in practice use of this instrument, and train personnel, such as Nurse Auxiliaries, to use it as well. Each activity had an application guide with explicit instructions about instrument use.
- 4) **Self-evaluation.** At the end of the month, during the next course meeting, facilitators guided a discussion to evaluate collectively progress made during the previous month, and to discuss advantages and disadvantages of course instruments.

Program components are described in Chart 1.

Chart 1. Distance learning process and methodology



6. Course evaluation

Course evaluation was based on learning of concepts included in selected readings and assessments conducted by facilitators of the extent to which job instruments were effectively put in practice and achieved improvements in service provision.

Results based course evaluation

Evaluation component	Per cent
Readings	40%
Instrument use and report from facilitators	60%
Total	100%

7. Course implementation

Four of the country's health areas were included in the study: San Marcos, Escuintla, El Progreso and Baja Verapaz. Health areas were selected to include one department per region in the country, to include as diverse regions as practically possible.

The intervention was implemented in twenty districts dispersed in four health areas, and an additional twenty districts were used as control group. Within each health area, five districts from each of the four participating Health Areas were randomly assigned to the intervention group and an additional twenty were assigned to the control group.

To start off the course, one facilitator per participating Health Area was trained in an initial three day workshop on the following topics:

- 1) Course objectives
- 2) Principles of distance education
- 3) Reproductive health course contents
- 4) How to implement course lessons
- 5) How to evaluate and follow-up progress in the learning program
- 6) Elaboration of work-plans and training schedules.

Following the initial workshop, facilitators met every month to receive training on the corresponding unit, and later replicate it with course participants.

Program was operational between May 26 and August 2001, under the following calendar of activities.

Calendar of activities

Activity	First unit	Second unit	Third unit	Fourth unit
Introductory meeting with facilitators	26/4			
Inauguration	11/5			
Health Area meetings	/5	/6	/7	/8
Independent reading and practicum	/5 to /6	/6 to /7	/7 to /8	/8 to /9
End of unit meeting and supervision from facilitators	/6	/7	/8	/9
First course module ends				

To summarize, intervention characteristics were the following:

- 1) 4 Health Areas
- 2) 5 Health Districts from each of the 4 Health Areas was randomly selected to be assigned to intervention group (total of 20 intervention districts and 20 control districts)
- 3) 2 participants from each Health District were invited to participate in the program (20 Districts x 2 participants per district = 40 expected participants in course)
- 4) 36 participants completed the course
- 5) 4 facilitators trained (one per participating Health Areas)
- 6) Involvement of an average of 10 persons per participating Health Area

- 7) Training of 3 facilitators from the Guatemalan Institute of Social Security (IGSS), 5 facilitators from the Department of Medical Sciences of the USAC, and 4 facilitators from the MOH's National Reproductive Health Program.

VI. Hypothesis and operational definitions

1. Hypothesis

Health districts (this is, one Health Center and four Health Posts) that participate in the Reproductive Health Distance Learning Program will provide more efficient, complete and accessible reproductive health services, than health districts that do not participate in the training course.

Efficiency of health services provided at Health Centers and Posts was assessed through a patient flow analysis that determined waiting times to receive services, the number of unnecessary contacts that clients have with administrative personnel, and the actual client-provider interaction time.

Completeness of services provided was assessed through observations that estimated the level of completeness of information received by each client, depending her individual characteristics or profile.

Accessibility to family planning services was assessed in terms of the proportion of women receiving contraceptive information, regardless of the main motive for their visit to the health unit, and the completeness of family planning information received.

2. Variables

- 1) The independent variable is participation in the distance learning course
- 2) The dependent variables are:
 - i. Service efficiency, measured by:
 1. Client waiting time to receive services from health personnel
 2. Time spent by clients with service providers
 3. Number of contacts with service personnel
 - ii. Completeness of reproductive health services received by clients:
 1. Number and type of reproductive health services received by each client, according to her individual profile.
 - iii. Access to family planning services:
 1. Proportion of women receiving contraceptive information, regardless of the main reason for their visit to the health unit.
 2. Completeness of family planning information received.

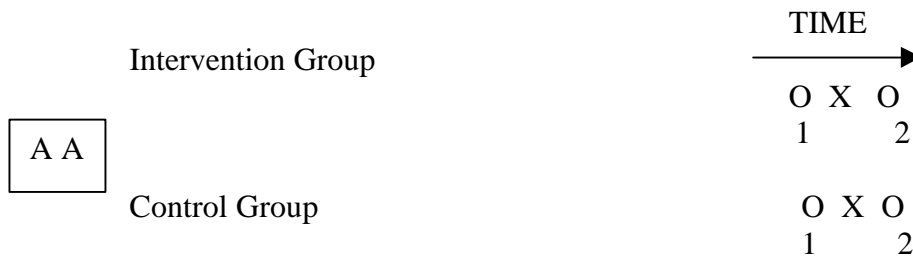
3. Variables, sources of information and indicators

Variable	Source of information	Indicator
Efficiency of service	Patient flow analysis	Waiting time to receive services Duration of client-provider interaction Number of contacts before and after consultation
Completeness of reproductive health services received by clients	Exit interviews	Completeness of service received by clients, according to their health needs (number of reproductive health services received, depending on the client's needs)
Access to family planning services	Exit interviews	Completeness of family planning information received by clients

VII. Research design

1. Design

The study design was quasi-experimental with pre and post assessments and with one experimental and one control group, as described in the following diagram.



VIII. Measurement

Quantitative assessments of reproductive health services were conducted before and after the intervention. Process evaluation included an assessment of improvements made during course implementation.

Measurement instruments included:

- 1) Observations to assess the information received by each selected client and the quality of services received.
- 2) Patient flow analysis to determine the number of different stations patients must visit within the health center, as well as the amount of time spent waiting at each service station.

Baseline measurement was conducted in March 2001 and endline assessment was conducted during August 2001. In both, baseline and endline assessment, clients were selected with a systematic interval. Eligible respondents were requested informed consent to be followed to implement the patient flow analysis and to observe their interaction with service providers.

As described in the previous section, the dependent variables of this study included service efficiency, completeness of reproductive health services received, and access or accessibility to family planning services.

- 1) To measure service efficiency, the study conducted the patient flow analysis using trained observers who requested consent from clients to take times and location during their stay at health facilities. Based on observer reports, the study estimated waiting times from the moment the client arrived to the health facility, until she left. Observers recorded the time spent at each service station, and the number of contacts with service and non-service personnel.
- 2) To measure completeness of reproductive health services received by clients, this study defined four client profiles, as follows:
 - a. Non pregnant woman with child less than six years of age
 - b. Pregnant woman with child less than six years of age
 - c. Non pregnant woman with child less than six years of age does not use contraceptives and would like to use a method.
 - d. Non pregnant woman with child less than six years of age and vaginal flows.

Depending upon their personal characteristics each client profile requires specific information and services. Using consultation observations, the study first determined the services and information needed by each client profile. Drawing from available information the actual number of items provided or informed during consultation was estimated. From this information, the study developed a scale of completeness of services received by each client, that is expressed as a per cent of items informed or provided, out the specified maximum of possible items relevant for her client profile.

- 3) To measure access to contraceptive information and services, observers asked each woman about the main motive of their visit to the health facility (on the day of the interview), whether the service provider asked about reproductive intentions or their desire to use contraceptives. If they were interested in receiving such information, the respondent was then

asked what specific information was she provided with. Based on such information, it was possible to determine the respondent's reproductive intentions, their desire or not to use contraceptives, as well as the questions asked by services providers, information offered and whether or not a method was effectively delivered. From this information it was possible to assess if more women had indeed access to contraceptive information and the extent to which their contraceptive needs were effectively satisfied at health facilities.

IX. Results

1. Sample size

The baseline measurement included 1,310 exit interviews and patient flow analyses, and the final survey included 1,001 cases. Approximately one half of the interviews were conducted in intervention areas and the other half among control sites. These sample sizes are shown in table 1.

Table 1. Sample size: baseline and endline measurement

	Intervention	Control	Total
Baseline	722	588	1310
Endline	524	477	1001
Total	1246	1065	2311

A statistical analysis of the baseline and endline samples shows that both groups are comparable in terms of age, marital status, parity and, in general, demographic composition.

Sixteen per cent (16.6% or 383 cases out of the 2310 interviews conducted before and after the intervention) of women interviewed were 19 years of age or younger, 27.1% (626 cases) were 20 to 24 years of age, 23.9% 25 to 34 years of age and the remaining 17.9% were older than 35 years of age. The age structure of pre and post intervention samples is comparable and observed differences are not statistically different from zero ($p < 0.503$).

Approximately one quarter (25.6%) of women interviewed in baseline and endline assessments has more than four children; 22.0% has less than 18 or more than 35 years of age, and 43.9% (258 women including both survey rounds) had a last delivery within the past two years. Thirty one per cent (31.8%) of women interviewed had none of the characteristics associated with high risk. Forty five per cent (44.9%) have at least one such characteristic, 20.1% have two risk factors, and 3.2% have three risk factors.

Reasons for attending health facilities remain of course unchanged before and after the intervention. As has been observed in previous studies, one half of clients attending health centers request care for sickness of a child. An additional 25 to 30% attend for

reasons associated with own sickness. Fifteen to twenty per cent attend for prenatal care, and an additional 7.2% attend to vaccinate their children. Less than ten per cent (6.9%) seek family planning services. Postnatal services are rarely requested by women attending facilities (1.0%). This finding is unexpected, considering that 7.6% of women interviewed had a birth within the previous two-month period.

More than eighty per cent (82.7%) have a child less than six years of age, and only 9.8% would like to get pregnant within the next year. One third of the total sample (33.3%) uses contraceptives or has had a sterilization performed. Among eligible women, also one third (32.3%) would like to use contraceptives (nearly one half would not like to receive a method, but 19.4% are not sure if they want to use them).

As described in the methodology section, four client profiles were designed as follows:

- 1) Non pregnant woman with child less than six years of age
- 2) Pregnant woman with child less than six years of age
- 3) Non pregnant woman with child less than six years of age does not use contraceptives and would like to use a method.
- 4) Non pregnant woman with child less than six years of age and vaginal flows.

The sample sizes achieved to analyze services provided to each of the above profiles is shown in table 2. This table excludes women with characteristics different from the profiles described above.

Table 2. Sample sizes of selected client profiles (number of women interviewed)

Client profile	Intervention		Control		Total
	Pre	Post	Pre	Post	
Non pregnant mothers	191	141	181	176	689
Pregnant mothers	106	89	75	65	335
Non pregnant mothers want methods	109	70	98	72	349
Non pregnant potential problems	164	116	117	94	491
Total	570	416	471	407	1864

Source: Exit interviews with clients. *Institutionalization of service delivery improvement strategies: A Distance learning program*. March-October, 2001. Population Council. Guatemala.

The total sample, including pre and post surveys, included 689 non pregnant mothers with children less than six years of age: 332 among intervention districts and 357 among control districts. Among pregnant women with children under six, 335 were collected: 195 in intervention areas and 140 in control areas. In the total, 349 interviews were conducted among non pregnant women with children under six, who do not use contraceptives and would like to use a method. Finally, 491 interviews were conducted

among non pregnant women with children less than six years of age, with potential problems such as vaginal flows.

2. Waiting times and patient flow analysis

One of the main purposes of this intervention was to reduce the number of unnecessary contacts that clients have during their visit to health facilities, to reduce the down time spent at the health facility, especially by reducing waiting times to receive services. This is important because clients unnecessarily wait more than one hour before receiving any kind of service, they are requested to pass through several unnecessary steps prior to having an interaction with service providers.

Through the patient flow analysis , it was possible to determine the total number of pre-consultation contacts; this is, the number of contacts the client has with administrative or paramedical personnel prior to receiving services from providers. Survey results show that, while the average number of contacts remained constant among the control districts, it reduced from an average of 3.1 to 2.7 among intervention districts. Such difference is statistically different from zero ($p < 0.1$).

Table 3. Waiting times and patient flow analysis

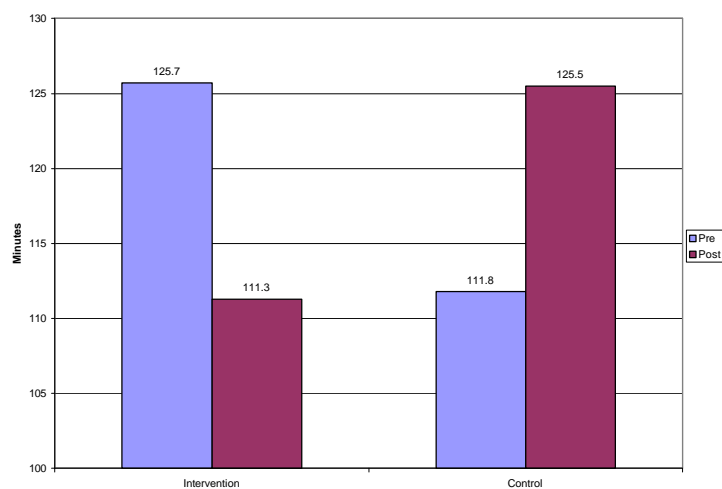
	Intervention		Control		Post-Pre Difference	
	Pre	Post	Pre	Post	Intervention	Control
Number of pre-consultation contacts	3.1	2.7	2.9	2.9	-0.4*	0.0
Waiting time (minutes)	113.3	97	101.8	114.7	-16.3*	12.9
Interaction with provider (minutes)	24.4	20.9	20.9	17.7	-3.4*	-3.2*
Total time in service (minutes)	125.7	111.3	111.8	125.5	-14.4*	13.7
* Significant post-pre differences ($p < 0.1$)						

Source: Patient flow analysis. *Institutionalization of service delivery improvement strategies: A Distance learning program*. March-October, 2001. Population Council. Guatemala.

Concerning the total time spent at health facilities, table 3 and graph 1 show significant improvements among intervention districts, as compared to control sites. While the total time at the facility increased from 111.8 minutes to 125.5 minutes among control sites, it decreased from 125.7 minutes to 111.3 among intervention districts. Such difference of 14.4 minutes is statistically significant.

Results also show a significant decrease in waiting times, prior to receiving services. Waiting times reduced from 113.3 minutes to 97 minutes among the control group, while it increased from 101.8 to 114.7 among the control group.

Graph 1. Total time in health facility (Minutes).



Source: Patient flow analysis. *Institutionalization of service delivery improvement strategies: A Distance learning program*. March-October, 2001. Population Council. Guatemala.

Results also show a significant reduction in the total time of client-provider interaction. In the case of intervention districts, such time decreased from 24.4 minutes before the intervention, to 20.9 after the intervention. Such interaction time also decreased significantly among control sites, from 20.9 minutes prior to the intervention to 17.7 minutes post-intervention. However, it will be shown in the following section that information provided among intervention sites, proved to be more complete than control sites. This indicates that client-provider interaction was more efficient among intervention sites, because more information was provided during a shorter period of interaction.

3. Completeness of information provided

The second dependent variable of this study was completeness of service received by clients, according to their health needs (number of reproductive health services received, depending on the client's needs). To assess completeness of services, this study used client profiles defined in subsection 1 on page 15.

Each woman needs information and services depending upon her personal characteristics and health status, as defined by her client profile. Depending upon the client's characteristics, this study identified what information was relevant for her, what type of services she should have received, and if she effectively received such information and services.

Drawing from an optimal number of items that the woman should have been informed about, or services that she should have received, the study developed a scale of completeness of services received. The scale was expressed as a percent of items

informed or provided, out of the specified maximum of possible items relevant for her client profile.

Results of the completeness scales for each client profile are presented in table 4. This table shows the average completeness index for each client profile, before and after the intervention in experimental and control districts, and the corresponding differences between the baseline and endline measurements.

Results show that the estimated degree of completeness of services and information provided to all client profiles was 28.7 per cent points. Among the first profile, which includes non pregnant mothers with children less than 6 years of age, the estimated level of service completeness was 33.2 points, as compared to 25.7 per cent points among similar women, but who would like to receive contraceptive methods. Completeness of services provided to women with potential problems, such as vaginal flows, was 21.5 per cent points, which was the lowest score among the profiles analyzed.

Table 4. Completeness of information and services received according to client profile, before and after intervention, among experimental and control districts.

	Intervention		Control		Pre-post differences		
	Pre	Post	Pre	Post	Intervention	Control	Total
Non pregnant mothers	22.2	44.4	24.4	45.2	22.3	20.8	33.2
Pregnant mothers	25.7	45.7	23.0	41.0	20.0	18.0	33.4
Non pregnant mothers want methods	20.7	39.6	18.8	29.0	18.9	10.2	25.7
Non pregnant potential problems	14.0	31.0	16.5	29.0	17.1	12.5	21.5
Total	20.2	40.2	21.1	37.9	20.0	16.9	28.7

Source: Exit interviews. *Institutionalization of service delivery improvement strategies: A Distance learning program*. March-October, 2001. Population Council. Guatemala.

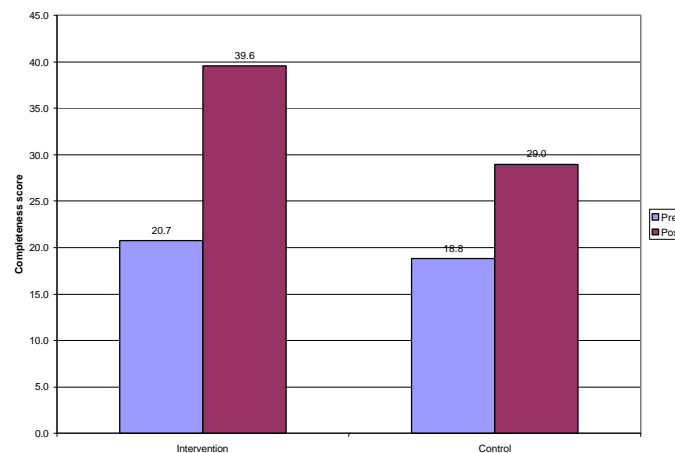
Concerning before and after intervention differences, results show that completeness of services increased from an average of 20.2 point before intervention among the experimental sites, to 40.2 points after intervention. Such result compares with a 16.9 point difference observed among the control districts, which increased the completeness score from 21.1 points to 37.9 points.

The most significant improvements were observed in services provided to non pregnant mothers, whose score increased from 22.2 points to 44.4 points (22.3 points difference)

among intervention sites. The corresponding scores among the control sites were 24.4 prior to the intervention, and 45.2 points after the intervention.

An important improvement was also observed in service provided to non pregnant mothers who would like to use contraceptive methods. While the initial completeness score was 20.7 in the intervention group (18.8 among control sites), the estimated level after the intervention was 39.6 points (29.0 points among the control group). The 18.9 point gain in the intervention group was significant with respect to the improvement observed in the control group, thus suggesting a positive impact of the intervention. This result is shown graphically in graph 2.

Graph 2. Completeness of information and services provided to non pregnant women with children less than 6 years of age and who would like to use a contraceptive method.



Source: Exit interviews. *Institutionalization of service delivery improvement strategies: A Distance learning program*. March-October, 2001. Population Council. Guatemala.

In general, services provided to women with additional potential health problems, such as STIs, are more limited. While the initial completeness scores of services provided to non pregnant women with additional check up needs was comparable among experimental and control sites (14.0 among intervention sites, and 16.5 among control sites), there were observable differences after the intervention (31.0 point among intervention sites and 29.0 points among control sites).

To determine if changes or improvements in completeness of services provided to all client profiles were significant, the study performed an analysis of variance in which the dependent variable is the completeness index, and the sources of variation are the client profile and treatment (before-after, intervention-control). This test shows an F score of 40.7, which is statistically significant ($p < 0.000$), considering the sample sizes involved. Such results show a positive impact of the intervention in completeness score of services provided to all client profiles.

4. Access to contraceptive information and services

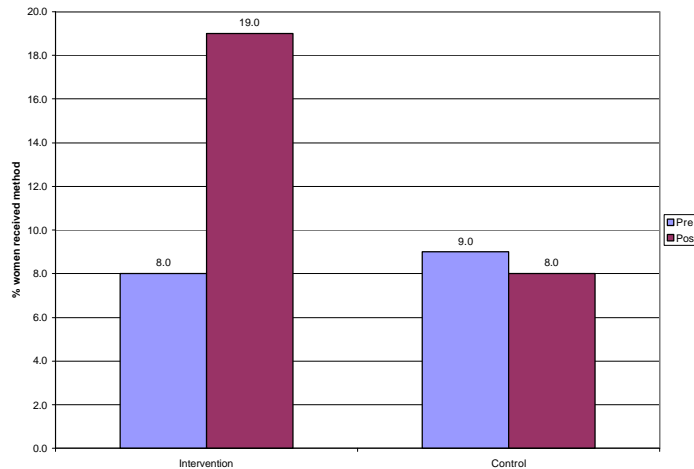
The third objective of this project was to improve access to contraceptive information and services. This implies that more women should receive family planning information regardless of the main reason or motive for attending the health facility and, if they request so, they should be provided with contraceptive methods. In addition, improved access to family planning, entails providing complete information about methods.

To measure access to contraceptive information and services, women were asked the main motive of their visit to the health facility (on the day of the interview), whether the service provider asked about reproductive intentions or their desire to use contraceptives. If they were interested in receiving such information, the respondent was then asked what specific information was she provided with.

The third course unit attempted to improve access to contraceptive services through the use of the *Rapi-entrega*, described in the intervention section. The instrument requests service providers to ask all women attending their health units about their reproductive intentions and their desire to use contraceptive methods. If the client is interested in any way in receiving such methods, the *rapi-entrega* then instructs the provider how to offer relevant information to the client.

Survey results are shown in graph 3, which shows the per cent of women who received contraceptive services, regardless of the main motive of their visit to the health facility. According to these results, prior to the intervention, approximately 8.5% of women received methods at both the intervention and the control groups (8% among intervention districts and 9% among control districts). Survey results show that, after the intervention, 19% of clients attending intervention health facilities received a method (independently of the reason for attending the Health Center or Post), as compared to 8% among control sites. The 11 point difference observed is statistically significant ($p < 0.000$), thus indicating a strong impact of the intervention.

Graph 3. Per cent women who received contraceptive services, regardless of the main motive of their visit to the health facility.

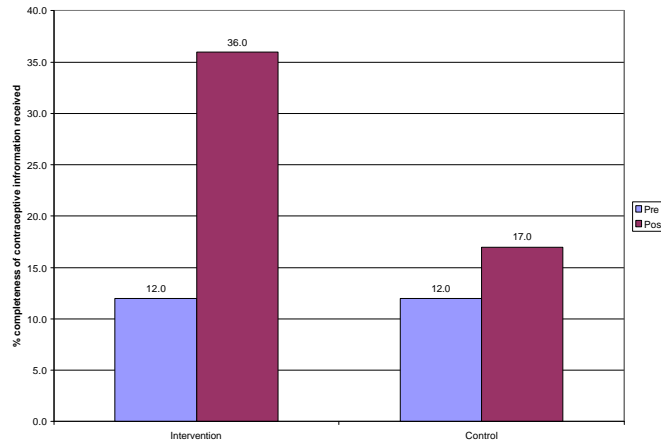


Source: Exit interviews. *Institutionalization of service delivery improvement strategies: A Distance learning program*. March-October, 2001. Population Council. Guatemala.

Finally, the question was asked: how complete is the contraceptive information provided to women who want to use methods? To answer this question, the study used a list of items that each woman should be informed about each method, depending upon her method of choice.

Results of the scale of completeness of contraceptive information received are shown in graph 4. This graph shows the per cent of items informed to women about contraceptive methods, out of a maximum number of possible items to be informed. Study results show a comparable level of 12 per cent of items informed among intervention and control groups prior to the intervention. However, after the intervention, such scale increases to 36% points among intervention sites, as compared to 17% among control sites. The 23 point difference is statistically significant ($p < 0.000$).

Graph 4. Per cent completeness of contraceptive information received by women who want to use methods.



Source: Exit interviews. *Institutionalization of service delivery improvement strategies: A Distance learning program*. March-October, 2001. Population Council. Guatemala.

To summarize, results show a significant improvement in access to family planning services offered at intervention sites, as compared to control sites. Changes observed are attributable to the intervention, to the extent that the intervention specifically aimed to improve the providers' capacity to identify women's reproductive health needs, to provide the necessary information and to offer the methods, if the woman so requires or wishes.

X. Conclusions and recommendations

The intervention proved successful to:

- 1) Reduce waiting times and make more efficient client-provider exchange
- 2) Reduce the number of unnecessary contacts with administrative and support personnel
- 3) Provide more complete services, according to each client's individual needs
- 4) Satisfy women's contraceptive needs more frequently
- 5) Provide more complete family planning information
- 6) Improve access to family planning information and services to all women attending health facilities.

The impact of the intervention is demonstrated by significant differences between the experimental and the control districts, before and after the intervention. Statistical tests conducted included paired t-tests, analysis of variance and chi-squared tests.

The four-month intervention proved successful to promote positive attitudes towards service improvement, to enable Health District Directors to lead health teams along their improvement efforts, and to make changes in specific service areas.

This intervention has several advantages:

- 1) Incorporates lessons learned from previous OR studies conducted in Guatemala.

- 2) Lessons learned and instruments available are organized in a systematic training program
- 3) The training program is directed to team leaders who guide service personnel throughout the improvement program
- 4) Impact is cumulative
- 5) Intervention is short-term (four months)
- 6) Intervention attempts to modify key areas of service provision including: patient flow, range of services provided and access to family planning services
- 7) Intervention does not interfere with service provision or program operation, because the training methodology is distance learning, which does not require that service providers leave health facilities in order to attend meetings and classes
- 8) Results evaluation is simple and low-cost.

The distance education methodology proved effective to train service providers without excessive costs or affecting program operation. Course materials were reviewed during routine meetings that district health teams held on a monthly basis and, furthermore, allowed them to organize their meetings around specific topics. Actions were coordinated and organized. Problems were discussed and solved with collaboration and participation of all interested team members. To this extent, the improvement program also helped strengthen coordination and organization of health teams, and consolidated leadership of team directors and supervisors. The participation of health personnel in specific improvement activities enhanced their self-confidence, and encouraged them to continue improving other service areas, such as the physical appearance of their health units, or the systematic assessment of other health needs of clients.

Based on the short-term experience of this project, this study recommends establishment of distance learning methodology and materials developed under this project, as an institutional standard to MSPAS primary level personnel on reproductive health service provision.

XI. Dissemination and programmatic utilization of results

This project had three main beneficiaries:

1. The main target audience was reproductive health service managers, including Health District Directors and NGO Program Managers.
2. A secondary target audience is the National Reproductive Health Program of the Ministry of Health that has developed a certified course that may be used as a mechanism to train institutional personnel, including doctors and nurses who provide services at Health Centers and Posts, as well as service providers of collaborating NGOs.
3. The Department of Continuing Education of the School of Medical Sciences of the University of San Carlos has also benefited from the establishment of this course. Prior to this course, the University had marginally participated in the process of improvement of reproductive health services. This project provided a unique opportunity to incorporate reproductive health contents in one of the many branches of the San Carlos Medical School.

This project provided an opportunity to integrate, systematize and consolidate more than one decade of programmatic research of the Guatemala Office of the Population Council. This project integrated into a single systematic improvement program, lessons learned through previous studies that have a demonstrable impact on service provision improvement. This program may be used in other countries with similar operational problems.

Concerning involvement of primary actors, this project was designed and was implemented collaboratively among representatives of the Population Council, the National Reproductive Health Program, and the University of San Carlos. More specifically, during the planning stage of this project, the Ministry of Health submitted a written request to the University of San Carlos to develop such a course to strengthen the NRHP/G implementation process. Such unprecedented request guarantees the full participation and commitment of incumbents.

REPORT 2.

POPULATION COUNCIL DIAGNOSTIC STUDY REPORT IN-HOUSE PROJECT

Title: Situational analysis of post-obstetric event services
in public hospitals in Guatemala

Country: Guatemala

Managing
Institution: Population Council

Implementing
Agencies: Ministry of Health (MSPAS); Social Security
Institute (IGSS) and Population Council

Project Director: Dr. Carlos Brambila

Principal Investigators: Dr. Werner Figueroa
Dra. Berta Taracena

Project period: March 1 – September 30, 2001

Report date: February 10, 2002

Situational analysis of post-obstetric event services in public hospitals in Guatemala Diagnostic Study Report

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Situational analysis of post-obstetric event services in public hospitals in Guatemala Diagnostic Study Report

Summary

1. Objectives

The general objective of this project was to conduct a situational analysis of the quality of family planning post-partum and post-abortion services available in 17 public hospitals in Guatemala, including medical units of the Ministry of Health and IGSS.

2. Project justification

Obstetric events include normal deliveries, cesarean sections and abortions. To begin any improvement program, it is first necessary to assess the quality of services offered, technical competence of service providers, attitudes and opinions of administrators and directors and the degree to which users received and understood all the required information prior to accepting a method after an obstetric event.

3. Research questions

- B. What hospitals have available contraceptive post-partum/post-abortion services?
- C. Among medical units that do not have these services available, what hospitals are interested and can establish such services?
- D. What is needed to reduce the unmet need of post-partum/post-abortion services in hospitals?
- E. How is it possible to improve the quality of post-partum/post-abortion services?

4. Methodology

The following techniques were used to collect information:

- In-depth interviews with hospital directors and personnel responsible of obstetric services.
- Structured interviews with patients hospitalized for delivery or abortion.
- Exit interviews with patients hospitalized for delivery or abortion.
- Structured interviews with doctors, nurses and medical and paramedical personnel that provide gyneco-obstetrical services and out-patient services.
- Inventory of equipment, materials, and the trained personnel that are required to provide post-partum/ post abortion family planning services.

5. Sample

**Summary table 1. Number of interviews completed and observation checklists.
Guatemala, July-September 2001.**

Number of interviews and observation checklists	N
Hospital directors	10
Staff responsible of OB-GYN and outpatient services	51
OB-GYN service providers	146
Inventory of supplies equipment and infrastructure	17
Postpartum clients	751
Post abortion clients	95
Number of hospitals	17

Source: *Situational analysis of post-obstetric event services in public hospitals in Guatemala. Field work conducted during July-September 2001. Guatemala.*

6. Highlights of results

**Summary table 2. Indicators of demand of post obstetric family planning services.
Guatemala, July-September 2001.**

Family planning indicators among post obstetric event clients	Postpartum	Post abortion
% would like to use a method after obstetric event	71%	87%
% received information	32%	38%
% asked if she would like a method prior to hospital discharge	24%	-
When did she decide to use a method		
Before pregnancy	11%	-
During pregnancy	67%	-
During hospital stay	18%	-
Who decided for her to use a method		
She herself	33%	33%
She and somebody else	64%	33%
% received a method prior to hospital discharge	12%	3%
Unmet need	PP	PA
% women who wanted a method and did not receive one	69%	91%
% women who were not explained why method not provided	48%	42%
Number of women interviewed	N	%
Postpartum	751	88.8
Post abortion	95	11.2
Total	846	100.0

Source: *Situational analysis of post-obstetric event services in public hospitals in Guatemala. Field work conducted during July-September 2001. Guatemala.*

Summary table 3. Training needs assessment among service providers. Guatemala, July-September 2001.

OB/GYN training needs assessment			
		N	%
Training needs			
% have been trained on family planning		101	69.2
Training topics			
More training on	Contraceptive methods	97	96.0
	FP counseling	89	88.1
	LAM	78	77.2
Less training	IUD services	30	29.7
	Program management	20	19.8
	Supervision	18	17.8
Family planning services provided			
% has provided contraceptives over last 6-month period		85	59.0
% has been trained		51	34.9
Postpartum/post abortion family planning services provided			
	PP/PA family planning counseling	120	85.7
	PP/PA hormonal methods	56	41.5
	PP/PA IUD services	39	28.9
	PP/PA sterilization	108	76.1
Climate of opinion			
% in favor of implementing a PP/PA program at hospital		139	95.2
% thinks that other OB/GYN personnel would be in favor		129	95.6

7. Technical assistance from the Frontiers project

This project was conducted with technical assistance from the Frontiers project. The Frontiers projects conducted a similar situational analysis in 1999 as part of a larger operations research project in Honduras. Frontiers will hire a consultant to review and modify the instruments used in this project and will provide guidelines and recommendations to improve over previous experience. Further technical assistance was provided by the Frontiers Regional Director and other research staff with experience in situational analysis and post-obstetric services.

I. Background

Obstetric events include normal deliveries, cesarean sections and abortions. To begin any improvement of hospital based post-obstetric event program, it is first necessary to assess the quality of services offered, technical competence of service providers, attitudes and opinions of administrators and directors and the degree to which users received and understood all the required information prior to accepting a method after an obstetric event.

It is important also to verify to what extent women that wish to be provided with a contraceptive method after an obstetric event, truly receive it, and if they received the expected method. On the other hand, it is also necessary to appraise how often service providers recommend the use of contraceptive methods, without making sure that the woman fully understands the required information.

The above information is required by USAID/G and the Calidad en Salud Program. The Calidad en Salud Program is the prime reproductive health USAID contract in Guatemala. As a leading program they have developed, in collaboration with both the Guatemala Ministry of Health (MSPAS) and Social Security Institute (IGSS), specific actions focused on creating conditions to improve the health of women and children. During 2000, the Calidad en Salud program contributed to the launching of the reproductive health program and the establishment of a National Technical Team, training of providers in 22 Districts, standardizing of VSC norms in 7 hospitals, the creation of a clinical training center with IGSS and the production of support materials for trainers and providers.

Calidad en Salud expects to expand family planning services to all areas and districts, including hospitals and clinics. Support will also be provided to establish and maintain two training centers for VSC, accompanied by a follow-up mentoring plan. Calidad en Salud will provide necessary equipment, training manuals and materials to VSC providing hospitals.

II. Problem statement

In a recent study conducted amongst MSPAS facilities, the POLICY project identified several medical barriers that affect method choice. These medical barriers include: the use of restrictive selection criteria, the requirement of partner consent to obtain family planning services, unjustified precautions, impeding procedures, and provider bias (Policy *et al.*, 1999). These problems are especially severe in the highlands. According to a study conducted in four departments (San Marcos, Quetzaltenango, Sololá, Totonicapán), 65% of providers are reluctant to offer contraceptives to adolescents, 66% request partner consent as a prerequisite, and 64% require that women have a certain number of children before offering certain methods. Users fail to receive all the necessary information about the method they selected. In the highlands, only 27% of providers presented information to users on the method's side effects, barely 33% gave

out pamphlets (INE and cols., 1999), and merely 46% of the users received the desired method (INE and cols., 1999).

According to the Reproductive Health Program, family planning services, post-partum and post-abortion patients should: (1) receive information on family planning methods prior to hospital discharge, (2) permit that the user select the method most adapted to her personal needs, and (3) make all the information about side effects, warning signs, and the correct and effective use of the chosen contraceptive method available. Adequate information includes benefits and risks of the use or application of family planning methods, as well as the course of therapeutic recommendations and the medical reasons for their recommendation, without exaggeratedly favoring the reasons for or against.

III. Research questions

The questions this study attempted to answer in regards to the demand for family planning services were the following:

- Are women undergoing postpartum/post abortion, interested in using family planning methods?
- What methods do they request? And when would they like to receive such services (immediately after the obstetric event, before hospital discharge or at a later point in time?)

Concerning service received by post obstetric event women, the present study aimed to answer the following questions:

- What hospitals effectively provide contraceptive post-partum/post-abortion services? What is the postpartum/post abortion contraceptive use rate before hospital discharge?
- To what extent are contraceptive needs and expectations of women satisfied?
- Among medical units that do not have these services available, what hospitals are interested and can establish such services?
- What is needed to reduce the unmet need of post-partum/post-abortion services in hospitals?

Special emphasis was placed on factors affecting the supply of family planning services to post obstetric event patients:

- What is the training level and what are training needs of service providers to improve postpartum/post abortion services?
- Are service providers, directors and supervisors interested in providing post obstetric event family planning services?
- Are there institutional barriers, such as negative attitudes of hospital directors, lack of infrastructure or stock outs of supplies, to improve such services?
- In general, how is it possible to improve the quality of post-partum/post-abortion services?

IV. Problem solution

To answer the above questions, FRONTIERS conducted four surveys directed to: (a) women who had an obstetric event (delivery, cesarean section or abortion) prior to discharge from the hospital, (b) service providers who participate in OB/GYN services at hospitals, (c) hospital directors and personnel responsible of obstetric services and (d) inventory of equipment and supplies.

Research topics included the following.

Interviews with women.

F. Prenatal care: assistance, contraception counseling, informed choice of a method.

G. Pre-labor care: patient handling, method offer and request, attempts to influence users, etc.

H. Method acceptance: desired method, information provided, follow-up offer and continuous care, etc.

I. Signing of institutional informed consent forms, clarity about the purpose of using these forms, level of client understanding of the manner and moment the service will be delivered.

J. Other kinds of reproductive health-related care.

Interviews with hospital directors and personnel responsible of obstetric and outpatient services.

K. The study attempted to assess opinions, attitudes and practices of hospital administrators.

L. The study aimed to determine what hospitals have contraceptive post-partum/post-abortion services available and, among medical units that do not have these services available, which ones would be interested in establishing them.

M. Directors and personnel responsible were prompted as to how services may be improved and what resources would be needed to satisfy clients' needs. Personnel responsible of obstetric services include Chief Doctor of Gyneco-Obstetrical Services and Chief Nurses.

Interviews with obstetric service providers.

N. Service providers were asked about their opinions, attitudes and practices related to post-partum/post-abortion services. They were asked about their perception of women's needs and how hospital services may best serve those needs. In particular, the study asked what is needed to reduce the unmet need of post-partum/post-abortion services in hospitals?

O. The instrument encouraged, insofar as possible, the uninhibited expression of ideas and invited to describe situations women are faced with after receiving care for an obstetric event. The questionnaire had no individual identifiers, thus guaranteeing anonymity. Interviewees answered the questionnaire in groups, which then were deposited in a box, so as to guarantee the confidentiality of answers.

Inventory of equipment and supplies.

P. Following standard situational analysis procedures, the study used observation guides to determine what obstetric equipment is available at each selected unit, whether it is functional, its location and accessibility. Also, the inventory

checklist included a listing of the basic medicines and supplies necessary to provide high quality post-obstetric event services. Special attention was given to pain relievers available to be provided to post-abortion patients.

V. Objectives

The general objective of this project is to conduct a situational analysis about the quality of post-partum and post-abortion services available in 17 public hospitals in Guatemala, including medical units of the Ministry of Health and IGSS.

Specific study objectives are:

- Determine what hospitals offer post-partum/post-abortion services, and to what extent they satisfy women's contraceptive needs?
- Among the medical units that already have post-partum/post-abortion services available, diagnose the quality of services and opportunities to strengthen services, including procedures to provide information and counseling to interested users, technical competence of service providers, follow-up of users and constellation of services offered.
- Conduct a training needs assessment among hospital-based service providers.
- Assess equipment and supply needs amongst medical units capable of providing post-obstetric event contraceptive services.
- Determine the willingness and availability of service providers to incorporate post-partum/post-abortion contraceptive services in medical units where they are lacking, and identify the main challenges and needs to establish such service.
- Assess the acceptability and potential demand for contraceptive post-partum/post-abortion services prior to discharge from the medical facilities.

Through the above objectives, FRONTIERS expects to provide useful information to incorporate post-partum/post-abortion services or improve them where they are already available.

VI. Methodology

1. Data collection

To collect information, the following techniques were used:

- In-depth interviews with hospital directors and personnel responsible of obstetric services.
- Exit interviews with patients hospitalized for delivery or abortion.
- Structured interviews with doctors, nurses and medical and paramedical personnel that provide gynecological services and out-patient services.

- Inventory of equipment, materials, and the trained personnel that are required to provide post-partum/ post abortion family planning services.

Service providers included in the study were:

- Hospital directors and personnel responsible of obstetric services.
- Doctors and nurses who are heads of gyneco-obstetrical services and outpatient services.
- Medical and paramedical personnel that provide gyneco-obstetrical services and outpatient services.

Selection criteria for patients or clients to participate in this study were the following:

- Provide informed consent to the observer and/ or interviewer for their participation in the study.
- Admitted for delivery, either normal or with complications, or abortion, spontaneous or induced outside of the hospital.
- Less than 45 years of age.

2. Population and sample of hospitals

In Guatemala there are 70 hospitals and medical units that provide obstetric care, including MOH and IGSS units. The diagnostic study took place at 17 hospitals nationwide, including MOH and IGSS hospitals. The sample includes National, Regional, Health and District Hospitals, as well as *Maternidades Cantonales*¹ and Health Centers “A” that provide maternity services.

Hospitals were selected in a two-step process involving: (1) stratification of medical units by region and type of medical unit, defined by the volume of maternity services provided every year and (2) random selection of units within each stratum.

The complete list of medical units that provide maternity hospitals in Guatemala is included in Appendix 1. The stratification used to select hospitals is shown in the following table 1.

Table 1. Number of hospitals and sample stratification. Guatemala, July-September 2001.

	Hospital Type						Total
	Regional	Area	District and Type A HC	Maternidad Cantonal	IGSS Hospital	IGSS Medical office	
Northeast	2	6	2	1		3	14
Southeast		5	4		5	1	15
Central west	2	4	4	2	2	3	17

¹ District level semi-rural clinics providing maternity services exclusively.

North west		7	15			2	24
Total	4	22	25	3	7	9	70

Source: Institutional information provided by MSPAS and IGSS, 2001.

Study hospitals were selected randomly (using assignment of random numbers with an Excel function), in each of the cells in the table above.

3. Procedure and field work

3.1. Procedure

- Authorities from the central level of the MOH evaluated the interest and viability of the study, and provided official authorization to conduct this study in May, 2001.
- Hospital directors were informed about the study in a meeting sponsored by the Calidad en Salud project in June 13, 2001.
- Statistics from previous years were reviewed to determine the volume of post-partum and post-abortion services. Based on such, a classification of hospitals was made to select a random sample of both MOH and IGGS establishments.
- Interviewers were trained and selected to conduct the surveys and observations. Training was conducted in July, 2001 including a review of interviewing and observation procedures, review of study instruments and field practices.

3.2. Field work

- Field work was conducted between July and September 2001 by a team of 10 trained interviewers.
- Each hospital was visited by one team of three interviewers each. Two interviewers applied questionnaires to hospital directors and service providers and conducted the observations of material, equipment and infrastructure available. Another interviewer applied questionnaires to postpartum/post abortion patients.
- Interviews were conducted with hospital directors, medical chiefs, nurses, and medical and paramedical personnel from gyneco-obstetrical services and outpatient services.
- Interviews with post-partum/ post abortion patients were conducted prior to discharge from the hospital as to identify their reproductive intentions, their wishes to use family planning methods, and their degree of satisfaction with hospital services.
- Inventories were taken of equipment, materials, and the trained personnel that are required to provide post-partum/ post abortion family planning services.

VII. Results

1. Hospitals studied

Randomly selected hospitals were the following:

Institution	Hospital	Number
IGSS	IGSS Sta. Lucia	1
	IGSS Zacapa	2
	IGSS Pamplona	3
	IGSS Z-6	4
	IGSS Mazatenango	5
MSPAS Nacional	Nacional Chiquimula	6
	Nacional de Salama	7
	Nacional de Mazatenango	8
	Nacional la Tinta	9
Regional	Regional de Xela	10
	Juan de Dios, Solola	11
	Regional de Zacapa	12
District and <i>maternidades</i> <i>cantonaes</i>	Malacatan, San Marcos	13
	Shell Eugenio L.	14
	Jose Felipe, Totonicapán	15
	Ramiro de Leon Carpio	16
	Distrital NEBAJ	17

2. Sample sizes

The study included 17 hospitals, 10 interviews with hospital directors (available at the time of the survey), 51 OB-GYN and outpatient service directors, 146 service providers, 17 observation checklists of equipment, and infrastructure available, 751 interviews among post-partum clients, 95 post-abortion patients. These sample sizes are shown in table 2.

**Table 2. Number of interviews completed and observation checklists.
Guatemala, July-September 2001.**

Number of interviews and observation checklists	N
Hospital directors	10
Staff responsible of OB-GYN and outpatient services	51
OB-GYN service providers	146
Inventory of supplies equipment and infrastructure	17
Postpartum clients	751
Post abortion clients	95
Number of hospitals	17

Source: *Situational analysis of post-obstetric event services in public hospitals in Guatemala. Field work conducted during July-September 2001. Guatemala.*

3. Postpartum/postabortion patients

This study collected information among 846 post-obstetric event patients: 751 postpartum patients (88.8%) and 95 post-abortion patients (11.2%).

3.1. Postpartum women

3.1.1. Socio-demographic profile

The average age of postpartum patients was 24.7 years of age, with minimum age of 15 and maximum age of 44 years of age. Twenty-two per cent (22.2% or 166 cases) were adolescents less than 20 years of age; 69.2% (517 cases) were 20 to 35 years of age and 8.5% (64 cases) were older than 35 years of age.

Labor force participation² among the sample interviewed was 27.4 per cent (206 cases). The main occupations included: salaried workers (59.7% or 123 women out of the 206 working women); domestic work (13.6% or 28 cases) and independent (street) vendors (9.2% or 19 cases).

The literacy rate among the sample interviewed was 81.4% (this is, 18.6% do not read or write). Although the majority of women (91.2% or 685 cases) declared themselves as married (consensual unions or marriage), 7.6% (57 cases) declared themselves as single mothers, and an additional 5 women (0.7%) preferred not to answer the question.

3.1.2. Pregnancy histories

² Question was: do you work out of home (*fuera de la casa*)?

Among the 751 postpartum women interviewed, 70.8% (532 cases) were normal deliveries, and 28.9% (217 cases) were cesarean sections. This is an abnormally high proportion of cesarean sections, according to international statistics.

Postpartum women interviewed had an average number of children of 2.62 prior to the current pregnancy (minimum of zero and maximum of 12 children) and an average number of pregnancies of 2.97.

Thirty-three per cent (33.4% or 251) had at least one cesarean section before the current delivery, 15.3% (115 cases) had at least one pregnancy loss (intended or unintended) before the current pregnancy.

3.1.3. Prenatal services

Eighty-eight per cent of women (88.5% or 665 cases) had at least one prenatal visit before delivery (this is, 11.2% attended the hospital without any prior prenatal control). The average number of prenatal visits was 5.77 (minimum of 1 and maximum of 20 visits). Eighteen per cent (18.7% or 124 cases out of the total of 665 cases of women who had at least one prenatal visit) had one, two or three prenatal visits before delivery. Forty-five per cent (45.7%) had 4 to 6 visits and 28% had 7 to 9 visits.

Most commonly, prenatal visits are made to health centers (29.12% or 194 cases out of the total of 665 women who made prenatal visits), but also to health posts (6.9%) and hospitals (6.3%). Frequently, women attend private doctors for prenatal visits (13.4% or 89 cases). *Parteras* or *comadronas* (traditional birth attendants) also provided prenatal services to 80 women in the study sample (12%).

The above is relevant for this study because, according to study results, regardless of source of pre-delivery information, only one third of the population interviewed (30.1% or 200 cases out of the total of 665 who had prenatal visits), received family planning information during such prenatal visits.

Drawing from survey results, 77.5% (155 women out of the 200 who received family planning information during prenatal visits) received specific contraceptive information, but only 34% (68 cases) actually received a referral to receive postnatal contraceptive services at the hospital (*carnet de control de embarazo*).

3.1.4. Family planning information received during hospital stay

Reportedly, 36.9% (277 women out of 751 postpartum cases interviewed), received information about the importance of spacing births, and 32% (240 cases) actually received information on contraceptives. Most commonly they receive information in group talks (41.6% or 114 responses out of a total of 274 responses provided by the 240 women who received information), or individual counseling (46.4% or 127 responses). Rarely do women report having received written material (32 responses or 11.7%).

Information is provided at the obstetric ward (68.4% or 167 responses out of 244 responses provided). Not infrequently, information is also provided at the emergency room (7.8 responses), at the operating room (4.1%) or even at the delivery ward (9%).

Among women who reported having received family planning information, 43% informed that the doctor provided the information, 27.5% were informed by social workers, 15.5 by nurse auxiliaries and 12% by nurses.

The most frequently mentioned methods are: Depo-Provera (20.4% or 135 responses out of a total of 661 responses provided by the 216 women who were informed about methods, and provided valid responses during the interview) and pills (19.5% or 129 responses). Seventeen per cent (17.1% or 113 cases) received information on sterilizations, and the IUD was mentioned to 10.3% of clients. Also, IGSS patients received information on Norplant (10.3%).

These results are summarized in Table 3.

**Table 3. Number of interviews completed and observation checklists.
Guatemala, July-September 2001.**

Family planning indicators	Postpartum
% received information	32%
% asked if she would like a method prior to hospital discharge	24%
% would like to use a method after obstetric event	71%
When did she decide to use a method	
Before pregnancy	11%
During pregnancy	67%
During hospital stay	18%
Who decided for her to use a method	
She herself	33%
She and somebody else	64%
% received a method prior to hospital discharge	12%
Unmet need	
% women who wanted a method and did not receive one	69%
% women who were not explained why method not provided	48%
Number of postpartum women interviewed	751

Source: Interviews with postpartum women. Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.

3.1.5. Family planning services received

An analysis of family planning services offered at these hospitals show that although 71.3% (535 cases out of 751 postpartum women interviewed) would like to receive a post-partum contraceptive method, only 32% (240 cases) received contraceptive information during hospital stay, 24.5% were asked if they would like a contraceptive

method and 12.3% (93 cases) actually received a method (14% according to registration files).

The total immediate postpartum contraception rate is 12.3% among all postpartum women. Considering only the 535 women who said that they would like to use a postpartum contraceptive method, the immediate postpartum contraceptive rate was 17 per cent (93/ 535). Ninety-seven per cent (97.8% or 91 cases out of 93 women who received methods during hospital stay) used sterilization and only 2 cases (2.2%) received Depo-Provera.

Among contraceptive acceptors, only 4.3 % (4 cases out of the 93 who received methods), would have preferred to receive the method at a later moment.

Seventy eight per cent (78.0% or 71 cases out of 91 cases) of women sterilized were adequately informed that they had the choice to have a sterilization made. A similar proportion (74.7% or 68 cases) were properly informed that sterilization is a permanent method, 35.2% (32 cases) were informed that sterilizations do not protect against STIs and HIV infections, and 38.5% (35 cases) were informed about possible complications. Eighty-nine per cent (89.0% or 81 cases) were requested to sign an informed consent form.

3.1.6. Unmet need

Among the 535 women who wanted to use a contraceptive method, 11.4% (61 cases) decided so before the current pregnancy, 66.9% (358 cases) decided to use contraceptives while being pregnant, and 17.8% (95 cases) during the hospital stay. Ninety-five percent of these women (95.9% or 513 cases) made the decision by themselves, or along with her partner. Participation of doctors in contraceptive choice showed to be conspicuously low (4 cases or 0.7%).

Sixty nine per cent (69% or 518 women) of 751 women postpartum desired a contraceptive method and failed to receive one. Forty-eight per cent (48%) were not explained why they did not receive a method.

3.1.7. Client-provider interaction

In general, providers do not introduce themselves to patients. Only 17.7% (133 cases out of the total of 751 postpartum women), reported that doctors introduced themselves during hospital stay. While 78.2% (587 cases) report that hospital personnel called her by her name, 21.4% per cent, inform that they were never addressed by their name. Sixty-three per cent (63.6% or 478 cases) report that they were explained what and how they were going to be examined by the service provider. Only one fourth (24.2%) were invited to ask questions.

3.1.8. Post-intervention information

Considering the base total of 751 postpartum women, 35.3% (264 cases) were informed about the health benefits of postponing a possible next birth for at least 2 years, 35.5% (266 cases) were informed that vaginal bleeding could continue for up to 40 days, and 61.6% (462 cases) were informed about the importance of attending post-natal controls, although only 56.1% were informed exactly where to go to.

Sixty-three per cent (63.6% or 476 cases) were reminded about the importance of breast-feeding, 31.5% were informed concerning when to resume sexual activity, 24.5% were informed about hygiene postpartum practices, such as daily baths (69.7% or 523 cases) or vaginal douches (24.5%). Also, doctors and nurses talked about nutrition (59.6% or 447 cases), and how to treat postpartum pain (47.0% or 353 cases), or postpartum alarm symptoms such as fever (43.9% or 329 cases), excessive bleeding (40.3% or 303 cases), infection signs (32.6 or 244 cases).

3.2. Post abortion women

3.2.1. Socio-demographic profile

Among the 95 post abortion patient, the average age was 28.45 year of age, with a minimum of 15 and maximum of 46 years of age. Thirteen per cent (13.7% or 13 cases) were teenagers, less than 20 years of age, and an additional 22.1% (21 cases) were older than 35 years of age (64.2% or 61 cases were 20 to 35 years old).

Forty one (41.1% or 39 cases) have remunerated jobs, mainly as salaried employees (82.1% or 32 cases), handcraft manufacturers or vendors (5.1% each).

The literacy rate (knows how to read and write) was 67.4%, and 94.7% (90 cases) were married or in unions. Three per cent (3 cases) declare themselves as single.

3.2.2. Pregnancy histories

The average number of weeks of the current pregnancy was 9.82, with a minimum of 1 week to a maximum of 20 weeks. The average number of previous pregnancies was 3.68 (range of 15 pregnancies), 2.65 previous deliveries and 2.39 children currently living. Nine per cent (9.6% or 9 cases) have had at least one previous cesarean section.

3.2.3. Access to services

Women attend the particular hospital where they are attended due to several reasons, such as proximity (21.5% or 20 cases) or because is the only alternative available (15.1% or 14 cases). In this case, 16.1% or 15 cases were referrals from health personnel.

Eighty-four per cent (84.2% or 80 cases) attended the hospital accompanied. Company may either be their partners or husbands (58.8% or 47 cases out of the 80 accompanied women), parents (12.5% or 10 cases) or other family members (10.0% or 8 cases). However, 15.8% (15 cases) attended the hospital by themselves.

Seven women out of the 93 post abortion cases (7.4%) reported problems upon hospital arrival. Most commonly, complaints refer to waiting times or harsh treatment from service providers. The average waiting time was 54 minutes (with a maximum of nearly 7 hours). Approximately 12 per cent of patients (12.6% or 12 cases) waited sitting on the floor, standing or walking in the emergency or waiting rooms.

3.2.4. Pain management

In a proposed 10 point scale (10 being the maximum pain ever felt in the woman's lifetime), women rated 6.6 pain felt prior to receiving surgical attention. However, only 56.8% (54 cases) were asked if they were feeling pain and 72.2% (39 cases) received pain relievers during intervention.

Eighteen per cent (18.9% or 18 cases) were awake while the surgical procedure was conducted. These women (18 cases) rated 6.78 (in the 10-point pain scale) pain felt during the intervention, but only 55.6% (10 cases) were asked if they were feeling pain during the intervention, and 40% (4 cases out of the 18 women who were awake during intervention) received pain relievers.

Women report a rating of 3.26 pain felt during the post-intervention period, 50.5% (48 cases) were asked if they were feeling pain, and, among these women, 77.1% (37 cases out of 48) received pain relievers after the intervention.

3.2.5. Reproductive intentions

Thirty-two per cent (32.6% or 31 cases) of 95 post abortion women report that they intended the present pregnancy: 72.6% (69 cases) were pleased with their pregnancies, 20% (19 cases) would have preferred to postpone such pregnancy, 3.2% didn't want more pregnancies and 4.2% did not respond the question.

Surprisingly, 14.7% (14 cases out of the 95 post abortion cases) report that they were using contraceptives at the time of the pregnancy: 5 women were using pills (35.7% of 14 method users) and 2 women were using Norplant, condoms, Depo-Provera or condoms. Such method failure rates are unexpectedly high and suggest that some women may not be using adequately their contraceptive methods, especially pills. This problem requires further research.

More than one half of post abortion patients (512.6% or 49 cases) report that they would like to have another pregnancy. Sixty per cent (60.4% or 29 cases) would prefer to become pregnant within the next two years, and 16.7% say that they would prefer to wait

longer. One fifth (22.9% or 11 cases out of the 49 women who would like to become pregnant again), are not certain as to when they would like to get pregnant again.

3.2.6. Family planning information received

Thirty-seven per cent (37.9% or 36 cases out of the total sample of 95 women) report having received information on contraceptive methods during their hospital stay. Thirty-nine per cent (39.5% or 17 responses out of 43 responses provided by the 36 women who received information) received group talks, 44.2% (19 responses) received individual counseling and 16.3% reportedly received printed materials.

Most frequently, information is provided at the postpartum ward (80% or 28 responses out of 35 responses provided by the 36 women who received contraceptive information), or the gynecological room (11.4% or 4 responses).

According to women's response, information is provided mainly by doctors (37.5% or 15 responses) or social workers (37.5%). Nurses provide contraceptive information to post abortion women less frequently (17.5% or 7 responses out of 40 responses provided).

Table 4 summarized indicators of post obstetric event family planning demand and unmet need.

**Table 4. Indicators of post abortion family planning demand.
Guatemala, July-September 2001.**

Family planning indicators	Post abortion
% received information	38%
% asked if she would like a method prior to hospital discharge	-
% would like to use a method after obstetric event	87%
When did she decide to use a method	
Before pregnancy	-
During pregnancy	-
During hospital stay	-
Who decided for her to use a method	
She herself	33%
She and somebody else	33%
% received a method prior to hospital discharge	3%
Unmet need	
% women who wanted a method and did not receive one	91%
% women who were not explained why method not provided	42%
Number of women interviewed	95

Source: Interviews with post abortion women. Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.

3.2.7. Contraceptive services received

Only 3 women out of the 95 post abortion patients (3.2%) received a contraceptive method after the intervention. One woman received pills and two received Depo-Provera. In all three cases, women wanted to receive the method during their hospital stay. Reportedly, women who received full information about the methods selected.

The woman who received pills was reportedly informed that she may have opted for other methods, where to get supplies, when to start using the pills, how to take the pills and what to do in case she missed one day. Also, she was informed about possible secondary effects, and when to attend the doctor, if side effects were present. Similarly, Depo-Provera users reportedly received all the necessary information about the method.

3.2.7. Client-provider interaction

Sixteen per cent (16.8% or 16 cases) report doctors introducing themselves by name, and 77.9% (74 cases) inform that service personnel would call them by their names. Seventy-two per cent (72.6% or 69 cases) report that they were properly informed about the procedure that was to be conducted, although 36.2% (25 cases out of the 69 women who report being informed) were not totally clear about the providers' explanations. Fifty-eight per cent (58.9% or 56 cases) received information about their health condition post-intervention.

3.2.8. Unmet need

According to survey results, 33.7% (31 cases out of the 95 post abortion patients) would have wanted to receive a contraceptive method prior to hospital discharge (60.9% responded that they would not like a contraceptive and 5.4% failed to respond).

Method preferences vary but, in general, women prefer Depo-Provera (32.3% or 10 out of the 31 cases who wanted methods), sterilization (16.1% or 5 cases) or pills (9.7% or 3 cases).

3.2.9. Post-intervention information

According to survey results, 51.6% (49 cases out of 95) were informed that they should postpone the next pregnancy, that bleeding could continue from 3 days to 3 weeks (18.9% or 18 cases), where to attend to in case of need (44.2% or 42 cases). Thirty-four per cent (34.7% or 33 cases) were informed about pain management, 28.4% (27 cases) about when to resume sexual relationships, and 17.8% (17 cases) about personal hygiene.

Information related to post abortion alarm signs and care is limited. Nearly forty per cent (37.9% or 36 cases) were warned about severe pain, 31.6% about fever, 28.4% (27 cases) about fatigue and 33.7% (32 cases) about continued excessive bleeding.

4. Factors affecting supply of postobstetric event family planning services.

Several factors were identified that affect the provision of family planning services at hospital-based family planning services. In this section, we present a listing of the major factors identified, and the following sections describe in detail findings related to each factor.

Service providers:

- Level of training and technical competence
- Specific training on postpartum/post abortion services
- Experience, initiative and practice offering services
- Attitudes towards family planning service provision
- Attitudes towards improving service quality at their hospitals.

Decision-making personnel at the hospital level. Staff responsible of outpatient and OB/GYN services and hospital directors:

- Personnel available at the corresponding departments
- Range of services offered at outpatient and OB/GYN services
- Range of methods offered
- Schedule of client attention
- Yearly calendar of training of personnel
- Resources available to provide family planning services
- Installed capacity
- Hospital based promotion and health education activities conducted
- Equipment available
- Availability of supplies.

Staff responsible of outpatient and OB/GYN services and hospital directors:

- Training level and technical competence of supervisors and directors
- Medical barriers and method bias
- Attitudes towards change and interest in improving service quality.

In the following sections we describe the nature and extent of these factors. No explicit attempt is made to establish a causal relationship between each factor and service quality or contraceptive services offered at each hospital.

5. Training needs assessment: service providers

5.1. Sample

This study conducted 146 interviews with service providers at OB/GYN wards in the selected hospitals. All service providers working at OB/GYN wards were eligible to be interviewed. As suggested in previous sections, the purpose of this interview was to assess training needs, and determine attitudes of service providers towards establishing a postpartum/post abortion program at their hospitals.

5.2. Training needs assessment

Survey results show that 69.2% (101 respondents out of the total of 146) have received training on family planning methods. Most frequently such training occurred during the last two years (81 respondents or 80% among personnel that has been ever trained). However, it should be noted that the remaining 20% of personnel that have received training, received such training more than two years ago.

The above figures imply that 55.5% of all 146 personnel interviewed, have been trained, and 43.8% need to be updated or have been trained.

Most frequently, providers have received training on contraceptive methods (96.0% or 97 cases), counseling (88.1% or 89 cases), exclusive breastfeeding (77.2 % or 78 cases), and female (73.3% or 74 cases) and male sterilization (60.4% or 61 cases).

It is important to note that only 53.5% (54 cases) of service providers interviewed declare having received training on IUD insertion.

Less than one third of interviewees have been trained on administrative issues (17.8% or 18 cases have been trained) and inventory control (11.9% or 12 responses).

Only 59 per cent (59.0% or 85 cases) have attended family planning users over the last six months prior to the interview (approximately July-August, 2002). The questionnaire then asked how many users of the following methods have you attended over the last six months? Responses show an average of 94.7 Depo-Provera users per service provider, over the 6-month period (15.78 per month), 88.07 Norplant users (IGSS hospitals only) per month per provider, and 54 users of pills and sterilizations. The least frequently offered methods are IUD insertions (25 users over the 6-month period), and vasectomies (21 users per provider over the reference period).

5.3. Specific training on postpartum/post abortion services

According to survey results, 34.9% (51 cases out of the total of 146 interviewees) have received any training on postpartum/post abortion contraception programs. Among these, ninety-six per cent (96.0% or 48 cases) have received training on family planning counseling (this represents one third of the total number of interviewees), three quarters (74.0% or 37 cases of the 51 service providers who have received training), 64.0% (32 cases of 51) have received training on IUD insertion/removal (this figure implies that 21.9% of the 146 service providers interviewed have been trained on IUD insertion). Eighty-six per cent (86.0% or 43 out of the 51 trained providers) received training on sterilization (29.0% of the 146 interviewees) and 80% received training on breastfeeding (40 cases). Only 19 providers reported having received training of administration/supervision/control of postpartum/post abortion programs.

Among those who have NOT received training on postpartum/post abortion, only one case disapproved providing contraceptive services at the hospital. Although 96.4% (27 out of the 29 cases that have not received training) expressed interest in receiving such training, only 82.1% (23 cases) expressed interest on IUD insertion or sterilization training. This result suggests a potential provider bias against this method.

5.4. Experience, initiative and practice offering services

It should be noted that 8.2% of the 85 providers that have offered family planning services over the last six month period, have not actually provided any method (only counseling services). An additional 21 cases (24.7%) offer three or four methods and the remaining 17.4% declare to offer more than four methods.

Concerning (self-assessment) practices, the questionnaire asked if the respondent had attended family planning users during the six-month period prior to the survey and, if applicable, what methods had he or she provided. Later in the interview, the question was asked, if the hospital provided family planning services over the last three month-period.

Concerning services provided by the interviewee, survey results show that 79.7% or 114 cases out of the 146 providers interviewed have effectively provided postpartum/ post abortion counseling. Respondents reported an average of 128.5 postpartum/ post abortion patients attended during the last six-month period, 108.7 users of hormonal or barrier methods, and 71.76 IUD patients, per service provider during the reference period.

Concerning providers' report of services offered by hospitals, results show that 85.7% of respondents (120 out of the 146 interviewees), indicate that hospitals provide family planning services, 41.5% (56 cases) report hospitals offering hormonal methods, 76.1% (108 cases) report hospitals offering sterilization services and 28.9% (39 cases of 146) reported hospitals providing postpartum/post abortion IUD services .

5.5. Attitudes and acceptability of postpartum/post abortion programs

Ninety-five per cent of interviewees (95.2% or 139 cases) are in favor of establishing a contraceptive postpartum/post abortion program at their hospitals (7 cases against), and expect a favorable reaction from their fellow providers at the hospital (95.6% or 129 cases out of 135 valid responses). According to survey responses, should a postpartum/post abortion program be established, they would expect that approximately one half of OB/GYN patients would request a contraceptive method prior to hospital discharge. Such appreciation is correct because, according to patient surveys (described in the previous sessions), approximately 70% of postpartum women and 40% of post abortion women would like to receive a method during hospital stay.

The most frequently mentioned problem that service providers anticipate to establish a postpartum/post abortion program at their hospitals are: (1) insufficient service personnel (41.7% or 60 out of 144 responses), (2) personnel's time constraints (9.0% or 13 responses), (3) cultural barriers (8.3% or 12 responses), and resistance from men to

contraceptive use (6.3%), (4) lack of a designated area within the hospital (6.3% or 9 responses). Some respondents mentioned also barriers from service providers (4.9% or 7 cases), and lack of economic resources (3.5% or 5 cases).

According to service providers opinions, the factors that need to be considered to implement postpartum/post abortion programs are the following: (1) attitudes and current training level of service providers (28% or 40 out of 143 responses), (2) more personnel (23.8% or 34 responses), (3) client counseling (9.1% or 13 responses) and (4) need for community promotion and information (8.4% or 12 responses).

The average expected number of family planning clients, should a postpartum/post abortion program be established at these hospitals, would be 50 cases per month, according to service providers' opinions.

5.6. Summary of indicators of service provider needs, attitudes and practices.

Table 5 below shows a summary of indicators of service provider training needs, family planning service practices and attitudes towards implementing postpartum/post abortion programs at their respective hospitals.

Table 5. Summary of indicators of service provider needs, attitudes and practices.

Guatemala, July-September 2001.

OB/GYN personnel		N	%
Training needs			
% have been trained on family planning		101	69.2
Training topics			
More training on	Contraceptive methods	97	96.0
	FP counseling	89	88.1
	LAM	78	77.2
Less training	IUD services	30	29.7
	Program management	20	19.8
	Supervision	18	17.8
Family planning services provided			
% has provided contraceptives over last 6-month period		85	59.0
% has been trained		51	34.9
Postpartum/post abortion family planning services provided			
	PP/PA family planning counseling	120	85.7
	PP/PA hormonal methods	56	41.5
	PP/PA IUD services	39	28.9
	PP/PA sterilization	108	76.1
Climate of opinion			
% in favor of implementing a PP/PA program at hospital		139	95.2
% thinks that other OB/GYN personnel would be in favor		129	95.6

Source: Interviews with service providers at OB/GYN services. Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.

6. Staff responsible of outpatient services

6.1. Sample

Eighteen service providers in charge of outpatient services were interviewed. Among them, 94.4% responded that the department or office under their supervision indeed provides family planning services. Only one case (5.6%) responded negatively, but argued that services were not offered due to lack of personnel, and would be interested in supporting, coordinating and supervising a postpartum/post abortion program. However, she or he would require training on all aspects of family planning services.

6.2. Personnel available at outpatient services

Among outpatient services that offer family planning services, all of them have an OB/GYN specialist, or a general practitioner (56.3% or 9 cases), a professional nurse (81.3% 13 out of 16 cases with valid information), or an auxiliary nurse (87.5% or 14 cases) and, in some cases, a social worker (37.5% or 6 cases). Other personnel, such as other medical specialists, graduate students, or training staff may also be found working in outpatient areas.

6.3. Range of methods offered and availability of family planning services at outpatient clinics

Methods commonly offered at outpatient clients include: Depo-Provera, female sterilization or oral contraceptives (88.2% or 15 cases each). IUDs and condoms are offered at 11 out of the 17 services surveyed (64.7%). Information about natural methods, including lactation amenorrhea, is offered in 7 or 8 hospitals (41.2 to 47.1%). Six hospitals declare that they offer male sterilization services (35.2%).

Contraceptive services are offered on a full-time basis, during office hours which, in this case are from 8:00AM to 3:00PM, this is an average of 7 hours per day.

6.4. Training levels and training needs assessment

Concerning training, according to staff responsible of outpatient services, 58.8% of personnel working in services under their responsibility (10 out of 17 staff responsible) had participated in training courses on contraceptive services. Most commonly, providers have been trained on family planning counseling (90.0% or 9 cases), male and female sterilization (70% or 7 cases), breastfeeding (60%), natural family planning methods and generic family planning training (50%). Only two or three respondents have received training on administration, supervision, and inventory and registration control.

Concerning the own individual training of respondents, survey results show that 10 out of 18 respondents (55.6%) have received training on family planning over the past six-month period. Family planning counseling and female sterilization are the most common topics on which personnel have been trained (90% or 9 out of 10 respondents who have received training). Also, 70% of respondents (7 out of 10) had been trained on IUD insertion and removal, breastfeeding and natural family planning methods. One-half of respondents (5 out of 10 respondents) have received training on vasectomies. Less than one-third (30% or 3 cases) have been trained on family planning program administration, supervision, registration and inventory control.

With respect to the total sample interviewed, the above results show that, one half (9 out of 18 staff interviewed) have been trained on family planning or female sterilization, 38.8% on IUD, breastfeeding and natural methods, and 27.8% on vasectomy.

6.5 IEC and promotion activities

Sixteen out of the seventeen hospitals surveyed (94.1%) declared that they actively promote family planning among clinic patients. Eighty-seven per cent (87.5% or 14 cases) provide individual talks, one quarter (24.4% or 10 per cent) provide group talks, 19.5 (8 hospitals) distribute written material, and 12.2% (5 cases) use posters or leaflets.

According to survey results, most frequently, OB/GYN doctors and professional nurses conduct promotion activities (75.0% or 12 cases out of 17), although auxiliary nurses are often times involved (81.3% or 13 cases out of 16 valid cases). Only one half (50% or 8 cases) of general practitioners are involved in promotion activities.

6.6. Service provision practices and self-appreciation

Concerning method service provision, according to respondents perceptions, 77.8% (14 cases out of 18) declare having provided family planning services during the past 6-month period. Most commonly, this involves female sterilization or Depo-Provera (71.4% or 10 cases for both methods), pills (57.1% or 8 out of the 14 who have provided services), natural family planning methods (35.7% or 5 cases) or LAM (21.4% or 3 cases). It is noteworthy that only 14.3% of service providers have used IUDs (2 out 14 cases).

6.7. Medical barriers to family planning service provision

To assess medical barriers to family planning service provision, the questionnaire asked if there exists a minimum or maximum age to provide each method, a minimum number of children to offer the method, and if they would recommend each method to childless women. Results show that nearly forty per cent (38.8% or 7 cases) establish an age to recommend contraceptive methods. Two cases out of the 18 responses obtained (11.1%) indicate that 18 years or less are considered age limits to recommend pills, NORPLANT, condoms, or IUDs. In the case of sterilization, established the lower limit to recommend this method at 25 (23 cases or 11.1%) or even 30 years of age (1 case or 5.6%).

Concerning maximum ages to receive methods, 4 cases (22.2% of 18 responses) would not recommend pills for women over 35 years of age, 16.7% (3 cases) would not recommend NORPLANT for women over 35 and 22.3% (4 cases) would not recommend IUDs or sterilization for women over 35 years of age.

Two or three respondents (10 to 17% of 18 hospitals surveyed) indicate a minimum number of children to recommend pills, Depo-Provera, condoms or IUDs (three cases). However, as many as 10 hospitals (55.5%) established a minimum number of two or three children before recommending female sterilization.

The questionnaire also asked about the methods that respondents recommend to space and to limit childbirth. (What family planning methods do you recommend in general for

women (married or single), who would like to postpone their next birth, if there are no side-effects?

Seventy-six per cent (76.5% or 13 cases out of 17 valid responses) recommend Depo-Provera, 52.9% (9 cases) recommend IUDs, 47.1% (12.3%) recommend pills, 35.3% (6 cases) recommend NORPLANT, or condoms, and 29.4% (5 cases) recommend natural methods, such as LAM.

Concerning recommended methods to limit fertility, 94.1% (16 cases of 17 valid responses) recommend female sterilization, but a significant 52.9% (9 cases) suggest vasectomies.

The questionnaire also asked if there is any specific method that the respondent would not recommend for women with reproductive tract infections or STDs. About eighty per cent (77.8% or 14 out of 18 cases) responded that they would not recommend IUDs, in such cases. A significant 22.2% (4 cases out of the 18 interviews) would not recommend pills or spermicides, 16.7% (3 cases) would not recommend vasectomies and 11.1% (2 cases) would not recommend Depo-Provera.

A very important one-third of respondents declare that there is at least one method that they would NEVER recommend. Eleven per cent (11.1% or 2 cases) declared that they never recommend IUDs and natural methods, such as LAM.

7. Staff responsible of OB/GYN services

7.1. Service provision practices

Staff responsible of OB/GYN services may include doctors, chief nurses and professional nurses. A total of 51 interviews were collected amongst staff responsible of these services. Considering the total of 51 respondents, 84.3% (43 cases) responded that their hospitals provide family planning services. The remaining 8 cases, informed that family planning services were not provided, due to the lack of medical equipment (36.4% or 4 cases), lack of personnel (27.3% or 3 cases) or lack of training (18.2% or 2 cases). In all cases, hospitals lacking family planning services would agree and like to provide such services. They would actively participate in training, supervision, administrative duties, but find economic and personnel constraints to be more proactive in this respect. Hospitals lacking family planning services would require training on counseling (100% of the 8 hospitals lacking these services), administrative, supervision and managerial issues (87.5% or 7 hospitals out of the 8 lacking services), IUD insertion, LAM and natural methods (75.0% or 6 cases), and sterilization (50.0% or 4 cases).

7.2. Personnel available OB/GYN services

Amongst hospitals lacking family planning services, most units have surgical room and a surgeon (87.5% or 7 cases), at least a technical anesthesiologist (75.0% or 6 cases), surgical assistant nurse and anesthesiologist (62.5% or 5 cases). However, according to

responses obtained, they would require contraceptive supplies and promotional materials (100% of the 8 units that do not offer family planning services), reserved area for patients (75.0% or 6 cases) or recovery.

Three quarters of respondents think that other OB/GYN personnel would accept and react positively to the establishment of postpartum/post abortion program, and 62.5% (5 cases) think that women would appreciate and use contraceptive services offered at their hospitals (3 cases think that patients would reject methods).

Concerning services offered by medical units that provide contraceptive services, results show that, most commonly, family planning services are offered at the OB/GYN outpatient clinic (69.8% of 43 respondents who declare that their units provide family planning services), of the postpartum ward (72.1% or 31 cases), delivery room (51.2% or 22 cases) or the gynecological ward (39.5% or 5 hospitals). About forty per cent (39.5% or 17 responses) inform about special rooms or clinics to provide these services. Forty-one per cent (41.9% or 18 responses) offer family planning services, implying that they offer immediate postpartum contraception services³.

7.3.Family planning services offered

Contraceptives offered include the following: female sterilization (90.7% or 39 cases), Depo-Provera (65.1% or 28 cases), pills (62.8% or 27 cases), IUDs (60.5% or 26 cases), condoms (51.2% or 22 cases), natural methods (41.9% or 13 cases), vasectomies (34.9% or 15 cases) or LAM (30.2% or 13 cases).

The above figures imply female sterilization is available at their medical units in 76% of cases interviewed (considering the complete sample of 51 staff interviewed); Depo-Provera is available in 55% of cases, pills 53%, IUDs 51%, condoms 43% and male sterilization 29%. Natural methods and LAM are offered in one quarter of hospitals represented in this survey.

According to survey results (considering only medical establishments that provide family planning services), personnel most frequently involved in family planning service provision include: OB/GYN specialists (97.7% or 42 cases), and general practitioners (55.8% or 24 cases). Three-quarters (76.7% or 33 cases) of respondents suggested that nurses and nurse auxiliary participate in family planning services at their medical units.

According to survey results, all OB/GYN specialists provide sterilization services, 56.1% (23 cases) provide Depo-Provera, 61.0% (25 cases) provide IUD services and pills, and 41.5% (17 cases) perform vasectomies. Nurses are mostly responsible of providing Depo-Provera or pills (70.8% or 17 cases), natural family planning counseling (62.5% or 15 cases), and NORPLANT (at IGSS hospitals, 33.3% or 8 cases). It is noteworthy that 41.7% (10 responses) indicated that nurses insert IUDs.

³ Note that these figures do not represent a per cent of hospitals offering services. They represent the percentage of responses provided by the 51 staff members responsible of OB/GYN services interviewed.

Forty per cent (40.5% or 17 cases) informed that personnel working under their supervision have participated in family planning training during the 6-month period prior to the survey. This figure represents one third (33.3%) of the OB/GYN staff interviewed. Most commonly, OB/GYN doctors have been trained on female sterilization (83.3% or 10 out of 12 cases with valid responses), NORPLANT insertion (among IGSS hospitals (75.0% or 9 cases), pills, condoms and vasectomy (66.7% or 8 cases). About sixty per cent (58.3% or 7 cases) have been trained on IUD insertion. On the average, sixty per cent (61.0% or 8 responses) have been trained on contraceptive methods such as pills, condoms, IUD insertion, Depo-Provera or natural methods, including LAM. Proportionally less, (53.8% or 8 responses) have been trained on female sterilization.

Among the 17 respondents who declare having participated in family planning training, OB/GYN specialists, professional nurses and nurse auxiliaries have been trained on (an average of) four family planning topics. Other personnel such as general practitioners and interns have received training on 2.6 topics.

Concerning contraceptive method offering, about eighty per cent (79.1% or 43 cases) of respondents informed that their hospitals effectively provide contraceptive methods including female sterilization and Depo-Provera (90.6% or 29 cases), pills (93.8% or 30 cases), condoms (62.5% or 20 cases), IUDs (56.3% or 18 cases). One-half (50.0% or 16 respondents) informed that male sterilization services are offered at their hospitals, 43.8% informed that they offer information about natural methods and 46.8% (15 cases) about LAM.

Fourteen per cent (14.0% or 6 cases) responded that IUD services are provided on a routine basis at their hospitals. Twenty-two per cent (22.2% or 8 respondents) attribute this situation to the lack of personnel available to conduct the insertions, and 27.8% (10 cases) referred to the lack of equipment. This last argument contradicts information provided by alternative sources.

One third of responses (34.3% or 12 cases) do not identify a single staff member responsible of providing IUD services, although in hospitals where there exists a person responsible of such services, the OB/GYN is generally identified as the staff responsible of conducting the insertions.

7.4.OB/GYN service based IEC and promotion activities

Ninety-two per cent (92.7% or 38 responses) inform that their services promote family planning amongst postpartum/post abortion patients. Such promotion is conducted in individual form (87.5% or 35 cases) or group talks (57.5% or 23 cases). Less frequently, hospitals use written materials (22.5% or 9 cases) or leaflets and pamphlets (25.0% or 10 cases). Such promotion activities are generally conducted by nurses (75.0% or 30 cases), but OB/GYN doctors also participate actively (72.5% or 29 cases). Auxiliary nurses (57.5% or 23 cases) also participate in these activities.

Thirty-seven per cent of respondents (37.2% or 16 cases out of 43 responses) report to have an established promotion program at their OB/GYN ward.

7.5. OB/GYN personnel training needs assessment

Concerning individual training of staff responsible of OB/GYN services at selected hospitals, only 14 individuals (27.5% out of 51 interviewees) report having received training on family planning topics over the 6-month period prior to the interview.

These 14 service providers have been trained on generic family planning topics (78.6% or 11 cases), family planning counseling (71.4% or 10 cases), and NORPLANT insertion (among IGSS hospitals, 57.1% or 8 cases). One half of respondents (50.0% or 7 cases) have received training on IUD insertion, male or female sterilization and LAM.

The above figures imply that only 22% out of the total of 51 staff responsible of OB/GYN services interviewed, have received generic training on family planning, 20% on counseling, 14% on IUD insertion and removal, male or female sterilization and LAM. Only 4% of these providers have received training on supervision, registration and management of postpartum/post abortion programs.

Eighty-two per cent (82.4% or 42 cases) have provided family planning methods during the 6-month period prior to the survey. Most commonly, interviewees have offered sterilizations (88.1% or 37 cases), pills or Depo-Provera (73.8% or 31 cases) and IUDs (52.4% or 22 cases).

7.6. Medical barriers

Concerning medical barriers, the survey identified that at least 6 staff responsible of OB/GYN services (11.1% of 51 responses), establish as a minimum age for pill use, 18 years or older (this is, they recommend pills to women 18 or older only), 3 (5.8% of respondents) recommend condoms for children 15 years or older only, 8 (15.6%) establish a minimum age of 18 for IUD use, 11 service providers (21.6%) recommend Depo-Provera for women older than 18 years of age, and 14 (27.4%) subjectively establish 25 years or older to be eligible for sterilizations.

Concerning maximum ages to recommend a method, the survey found that 41.2% of respondents (21 out of 51 staff) set a maximum age for pills, 17.6% (9 cases) for NORPLANT use, 5 cases for condom use (9.8%), 11 cases (21.6%) for IUD use, and 25.5% for Depo-Provera use.

Fifty-one per cent of respondents would recommend Depo-Provera to a childless woman, 59% would recommend pills, 71% would recommend condoms, and 39% would recommend IUDs.

With respect to the minimum number of children to recommend a method, the survey shows that 17.6% of staff responsible of OB/GYN services (9 cases) suggest a minimum

number of children prior to recommending pills, 14 service providers (27.4%) suggest that women should have at least one child before having an IUD inserted. Twenty-nine (29.4% or 15 cases) recommend a woman to have at least two children before opting for sterilization, and 21.6% (11 cases) suggest that a woman should have at least one child before using Depo-Provera.

Sixty per cent (60.8% or 31 cases) of respondents recommend Depo-Provera to space childbearing, 56.9% (29 cases) recommend pills, 37.3% (19 cases) recommend natural methods, 39.2% (20 cases) recommend condoms, and 33.3% (17 cases) recommend IUDs.

To limit birth, 84.3% (43 cases) recommend female sterilization and 66.7% (34 cases) recommend male sterilization. Some four service providers (7.8% of the 51 cases interviewed) would recommend other methods, such as pills, Depo-Provera or natural methods.

Among the total sample, 86.3% identified IUDs as a method not recommendable in case of STDs or RTIs. Some respondents (9 cases or 17.6%) also identified spermicides as not recommendable for these cases.

Relatively few respondents would not recommend a method. If anything, 5 respondents (9.8%) would not recommend IUDs, an equal number would not recommend natural methods, and 7.8% (4 cases) would not recommend spermicides.

8. Hospital directors

The present analysis is based only on 10 complete interviews with Hospital Directors that were achieved during field work. Additional interviews were completed with acting directors or chief nurses in charge of medical units. However, these interviews were deleted to represent in this section the opinion of Hospital Directors who have such title and position.

According to hospital directors interviewed, 7 out 10 hospitals (considering only completed interviews), have an active family planning program. Among the three hospitals that lack family planning services, all would be interested in providing such services. The reasons why the service is not presently offered include, in their opinion, lack of personnel, lack of space or lack of financial resources. Only one out of the three hospitals that presently do not offer services, think that hospital personnel would reject or oppose such a program. The same hospital director thought that the population would reject such service and would oppose the program.

Among the seven hospitals that offer family planning services, five of them offer methods as part of outpatient services, six offer prenatal family planning counseling, five (71.4% out of the seven hospitals offering services) offer postnatal services, and four (57.4%) have an organized post abortion family planning service.

Contraceptive services are offered at outpatient clinics (7 out of 7 cases), postpartum wards (85.7%), delivery rooms (42.9%), or even an ad hoc clinic (3 cases or 42.9% of this small sample).

Six hospitals offer interval services, including Depo-Provera (3 hospitals) and female sterilization (4 hospitals). Three hospitals offer pills, IUD services and condoms.

Only three hospitals offer immediate postpartum services, based on LAM, pills (2 hospitals), Depo-Provera and IUDs (also 2 hospitals).

On the average, hospitals may have five or six (5.7 average) OB/GYN offering family planning services. Also two or three (2.6 average) professional nurses or nurse auxiliaries, provide such services.

9. Equipment, supplies and infrastructure available

9.1. Schedule

Hospitals outpatient services are usually open from 7:00 AM to 4:00PM, and provide services 8 to 9 hours per day, five days per week (except two hospitals). Only two hospitals reported less than 8 hours of work per day, and one is open only three days per week.

9.2. Utilities available

Most hospitals have limited utilities: 64.7% (11 hospitals) have running water, 88.2 (15 hospitals) have electricity, sewage and sink. Fifty-eight per cent (58.8% or 10 hospitals) have an adequate number of seats, considering the volume of services provided. These results are shown in the following table.

**Table 6. Basic services available at hospitals.
Guatemala, July-September 2001.**

Running water continuous basis	11	64.7%
Electricity continuous basis	15	88.2%
Sewage	15	88.2%
Sink	15	88.2%
Seats	10	58.8%
Trash cans	7	41.2%

Source: Inventory of equipment and infrastructure. Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.

9.3. Family planning resources

Less than thirty per cent (29.2% or 5 hospitals) have a family planning clinic. Only 3 have signs indicating where family planning services are provided, 7 (41.2%) have flipcharts, and 4 (41.2%) have informational leaflets.

**Table 7. Resources available to provide family planning counseling.
Guatemala, July-September 2001.**

Family planning clinic	5	29.4%
Family planning sign	3	17.6%
Flipchart	7	41.2%
Leaflets	4	23.5%
Poster	5	29.4%
Valid N	17	100.0%

Source: Inventory of equipment and infrastructure. *Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.*

9.4. IEC and promotion activities

More than one-half of hospitals surveyed (9 out of 17, or 52.9%) have a working TV, 6 (35.3%) have a functional VHS, 4 (23.5%) have slide or transparencies projector. Also, more than one third (35.3%) or 6 hospitals, have a family planning VHS cassette, 3 hospitals have family planning related slides, and 2 had transparencies usable in family planning counseling or training.

**Table 8. Equipment available to conduct family planning promotion activities.
Guatemala, July-September 2001.**

Working TV	9	52.9%
Working VHS	6	35.3%
Working projector	4	23.5%
Working slide projector	4	23.5%
FP VHS	6	35.3%
FP Slides	3	17.6%
FP Transparencies	2	11.8%

Source: Inventory of equipment and infrastructure. *Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.*

Hospitals were not very active conducting IEC and promotion activities on the day of the survey visit. Only 3 hospitals provided family planning talks on that day. These talks referred to pills and Depo-Provera and to a lesser degree to sterilization, condoms and IUDs. Such level of IEC activities was verified through observation and direct inquiry to personnel responsible.

9.5. Facilities

Most medical units visited have the physical infrastructure necessary to offer surgical methods, such as IUDs and sterilizations: 16 out of the 17 hospitals visited (94.1%) provide adequate privacy to conduct examinations, 2 hospitals lack hearing privacy, but reportedly, all hospitals have clean and well lighted examination rooms.

**Table 9. Conditions of facilities available for family planning services.
Guatemala, July-September 2001.**

Equipment		
Hearing privacy	15	88.2%
Visual privacy	16	94.1%
Clear examination area	17	100.0%
Adequate light	17	100.0%
Gynecological lamps	4	23.5%
Sphygmomanometers	8	47.1%
Weighting	14	82.4%
Scissors	1	5.9%
Antiseptic solutions	7	41.2%
Stethoscope	8	47.1%
Exploration table	7	41.2%
Thermometer	2	11.8%
IUD insertion kits	2	11.8%
Cotton	9	52.9%
Gaza	10	58.8%
Pins fr cotton	9	52.9%
Speculums	1	5.9%
Tentacles	3	17.6%
Non disposable gloves	1	5.9%
Disposable gloves	4	23.5%

Source: Inventory of equipment and infrastructure. Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.

Concerning equipment, observations found that several units lack adequate equipment at the family planning clinics or at outpatient clinics, to provide family planning services. Only four hospitals have gynecological lamps (23.5% of the 17 hospitals surveyed), 7 (41.2%) have antiseptic solutions or exploration tables. Surprisingly, only 2 (11.8%) have IUD insertion kits in service.

9.6. Methods offered

The inventory instruments attempted to verify what methods are offered at each hospital, if each method was effectively offered the day of the visit, and whether there were supply stock outs in the previous six-month period. Whether or not each method was offered and if there had been stock outs, were determined through direct questions to staff responsible. Whether or not the method was effectively offered to clients during the day of the visit, was determined through observations.

**Table 10. Provision and family planning service supply.
Guatemala, July-September 2001.**

	Offered?	Offered today?	Stock outs
	Cases		
Pills	12	10	3
Norplant	2	2	2
IUD	8	5	3
Depo-Provera	12	8	2
Condom	10	6	1
Other	1	1	1
	Offered?	Offered today?	Stock outs
	Per cent		
Pills	70.6%	58.8%	17.6%
Norplant	11.8%	11.8%	11.8%
IUD	47.1%	29.4%	17.6%
Depo-Provera	70.6%	47.1%	11.8%
Condom	58.8%	35.3%	5.9%
Other	5.9%	5.9%	5.9%

Source: Inventory of equipment and infrastructure. Situational analysis of post-obstetric event services in public hospitals in Guatemala. Guatemala, July-September 2001.

According to survey results, pills and Depo-Provera are offered in 12 out of the 17 hospitals studied, IUD are available in only 8 hospitals (47.3%), and condoms are offered at 10 hospitals. A review of the methods offered during the day of the visit show some variations. IUD services were verified in only 5 hospitals (29.4%), Depo-Provera in 8 hospitals (47.3%) and pills in 10 (58.8%). Stock outs during the last six-month period of IUDs, Depo-Provera and pills were reported in only two or three of hospitals visited.

VIII. Conclusion

The purpose of this study was to determine what hospitals offer post-partum/post-abortion services, and to what extent they satisfy women's contraceptive needs. The study attempted to diagnose the quality of services offered among the medical units that already have post-partum/post-abortion services available, and identify opportunities to strengthen such services. The study also attempted to identify relevant factors affecting family planning service offering and supply.

To respond the above questions FRONTIERS conducted in-depth interviews with hospital directors and personnel responsible of obstetric services. structured interviews with doctors, nurses and medical and paramedical personnel that provide gynecological services and out-patient services, exit interviews with patients

hospitalized for delivery or abortion and an inventory of equipment, materials, and supplies required to provide post-partum/ post abortion family planning services. The diagnostic study took place at 17 out of the 70 hospitals nationwide, including MOH and IGSS hospitals. The sample includes national, regional, and district-level hospitals, as well as *Maternidades Cantonales* and Health Centers “A” that provide maternity services.

The study assessed the magnitude of post obstetric event contraceptive demand. The study showed that there exists a widespread demand and need for such services. However, family planning services effectively provided or offered are limited.

Survey results show that the contraceptive prevalence at the time of hospital discharge was 12% among postpartum women and 3% among post abortion women (751 postpartum and 95 post abortion women interviewed). Such rates may be considered low because 71.3% of postpartum and 87% among post abortion women wanted a contraceptive method. Furthermore, about one third of all women interviewed received information about contraceptive methods during their hospital stay. Only one quarter of postpartum women were offered the contraceptive method either during their pre-delivery stay or prior to discharge. Among post abortion women, none were offered the service. Clearly, women’s expectations and needs are not yet satisfied during their hospital stay.

There are several factors that are related to the above level of satisfaction of women’s needs. Services offered by providers are limited by their level of training, which in some cases is outdated. IUD training is conspicuously absent among the sample of providers interviewed. Specific training on postpartum/post abortion services is lacking. Thus, it is not surprising that the practice of offering contraceptive services is largely dependent upon the initiative, experience and self-motivation of providers. The problem is partially attitudinal. Although service providers are frequently interested in providing such services, the lack of an organized effort, limits their capacity to act and attempt to improve quality of services offered.

This study found no evidence of widespread opposition or antagonism towards family planning among service providers. Opponents to family planning services are rare and are not considered a major obstacle to provide the necessary services to satisfy women’s needs.

There are a number of obstacles to the establishment of postpartum/post abortion programs. Such obstacles are overcome to the extent that there is interest and initiative of service providers, supervisors and directors.

As is well known, human, material and financial resources are scarce, but they do not represent an obstacle to provide the necessary services. The schedule of attention is limited, but sufficient to offer services, there exists a proven installed capacity to provide services, which may be further used. Service providers have heavy workloads and commitments. However, as shown by hospitals with high performance standards and quality indicators, the provision of family planning services is NOT a matter of resources

or financial investment. The promotion and provision of these services largely and mostly depends upon provider and institutional interest and initiative.

The study confirms prior observations that the IUD is a method conspicuously absent in the range of methods available in the family planning program in Guatemala. The study shows that the method is rarely offered to post obstetric event patients, some providers have a strong bias against the method, and knowledge about the method may be improved. From the survey of equipment and infrastructure it may be demonstrated that IUD supplies are absent from outpatient and OB/GYN wards, but may be found in storage. There is no clear reason why the IUD is such an underutilized method in hospitals. The only indication provided by this study is the lack of training on the method among doctors and nurses. Although this study does not demonstrate a connection between lack of training and limited offering of the method, it is likely that the first step towards making the method available to women in Guatemala is training of personnel, not only at hospitals, but among all levels of attention.

Information provided in this study has had three main beneficiaries:

1. The main target audience consisted of Hospital Directors and reproductive health service managers. It is expected that study results will influence these key decision makers to establish or strengthen post-partum and post abortion services offered at their medical units.
2. A secondary target audience is the National Reproductive Health Program of the Ministry of Health, who has current information to improve obstetric services at hospitals.
3. A third target audience includes the Calidad en Salud Project. As described in the problem statement section, information generated in this study was used by the Calidad en Salud Project to orient decision-making concerning priority areas for training and services components that require strengthening.

Information provided by this study helped key stakeholders such as the Calidad en Salud Project and the National Reproductive Health Program, to establish priorities, and clear targets to improve family planning services offered to women undergoing obstetric events in public hospitals in Guatemala.

REPORT 3.

POPULATION COUNCIL OPERATIONS RESEARCH REPORT

TITLE:	School-based family life education for indigenous populations in Guatemala
MANAGING INSTITUTION:	The Population Council
IMPLEMENTING INSTITUTION:	Renacimiento (NGO)
AREA:	Patzún, Chimaltenango. Guatemala
PRINCIPAL INVESTIGATOR:	Carlos Brambila Francisco Mendez Puac The Population Council
START DATE:	April 1, 2001
END DATE:	October 1, 2001
DURATION:	7 Months

School-based family life education for indigenous populations in Guatemala

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School-based family life education for indigenous populations in Guatemala

Summary

Item	Description
Problem	Primary and secondary schools in Guatemala do not provide family life or sexual education. Acute need of adequate educational material for indigenous populations
Problem justification	The lack of well-structured sexual education programs in schools leads to negative consequences in the lives of adolescents.
Purpose	Improve reproductive health and family life education for indigenous populations in Guatemala
Objective	Assess the acceptability of school-based sex education among teachers, parents and students. Develop a culturally acceptable sex and family life education program adequate for indigenous schools in Guatemala. Adapt and field test sexual and family education tools in primary and secondary schools of Guatemala.
Intervention	Six weekly sessions on family life and sex education
Study population	5 th and 6 th grades primary school and 1 st to 3d grades secondary school
Sites	Eight primary and secondary schools in Patzún city in Chimaltenango, Guatemala.
Population size	Approximately 200 students and 10 family life and sex education instructors trained.
Dependent variables	1. Acceptability of school-based sex education amongst parents, teachers and students. 2. Knowledge and attitudes towards: <ul style="list-style-type: none"> a. Gender equality b. Responsible parenthood c. Preventive health practices (including awareness of the importance of attending health services, knowing when and how girls can get pregnant and boys can make girls pregnant, knowing risks of contracting STDs and getting pregnant after sexual initiation) d. For relevant grades: family planning and contraceptive use.
Methods	Baseline reproductive health and acceptability survey among teachers, parents and students Pre and post intervention assessment of the levels of knowledge attitudes based on questionnaires applied by trained interviewers. Questionnaires are applied in Cak'quikel Qualitative assessment of course implementation, obstacles and strategies for improvement, increase in teacher confidence and skill, and adult and youth attitudes about course and course implementation
Duration	March to October, 2001

I. INTRODUCTION

Health and Education in Guatemala

Guatemala's population is one of the youngest in the region: of the total 11.6 million inhabitants, 45% are under the age of 15, while only 3% are older than 65. In addition, 43% are from rural indigenous groups speaking 23 different languages. Guatemala is also one of the poorest countries in the region (INE, the National Institute of Statistics, estimated that 85.7% of the rural population lives in poverty, with 71.9% living in extreme poverty) and health indicators are generally poor, particularly in the area of reproductive health (INE, 2000).

According to ENSMI-98, the latest available demographic survey of Guatemala, 28.3 per cent of women have no education, 47.2 per cent have a primary level of education, 21 per cent have a secondary level of education, and 3.5 per cent have higher education.

The majority of the population of Guatemala has limited access to the education system because of economic and social inequalities, regional disparities, and other political, linguistic, and geographical factors. Still schools remain as one of the main institutions capable of adequately addressing community problems. Although they are not inclusive, schools are a driving force of change at the community level and the main mechanism through which traditional populations receive new information.

Adolescents in Guatemala

1. Current situation

According to ENSMI-98 results, 39 per cent of women ages 15 – 24 that reside in urban areas, and 16 per cent of women who reside in rural areas are in school. Economic reasons (inability of paying for more education, economic support needed by family, or a need to earn money) are the primary causes of abandoning education among women (25 per cent). These motives influence women in rural areas (27 per cent) more than women in urban areas (22 per cent). Other reasons include maternity, marriage, or caring for a child which account for 8 per cent of drop-outs in urban areas and 5.5 per cent in rural areas.

According to the same source, the average age at first sexual intercourse is 18, which apparently has increased during the past few years. Approximately one in seven women reported having their first experience of sexual intercourse before the age of 15, almost half had sexual intercourse before age 18, and a more than two thirds reported having intercourse before turning 20. However, as the level of education increases, there is a trend toward having the first experience of sexual intercourse at a later age.

The age of first union constitutes the first movement toward having exposure to the risk of pregnancy, and the beginning of a reproductive life. This has an important effect on fertility, because the younger a woman has a partner, the greater the amount of time she is exposed to pregnancy risk and the greater her potential of having children throughout her life. The prolongation of bachelorhood and celibacy reduces this potential and influences the levels of fertility in a population.

2. Current Adolescent Initiatives in Guatemala.

Specific work with adolescents in Guatemala is just beginning. Due to the diversity of cultural and language groups, the dispersion of the population, high volumes of annual migration for work, and the majority of adolescents who are out of school, there are few existing networks through which to reach them. The local FPA, APROFAM, offers integrated reproductive health services through 28 clinics nationwide. They focus on reaching people in rural areas and training traditional midwives. APROFAM uses traditional midwives, trained health personnel, and schoolteachers to provide training workshops and sexuality education for young people.

Sex education and contraceptive information have traditionally been absent from schools in Guatemala. Political and social factors, mainly opposition from the Church, have contributed to constraint access to information to large shares of the population. The previous administration (1994-1999) actively opposed contraceptive services and information. However, the present administration (2000-2005) has expressed interest in strengthening reproductive health and contraceptive services nationwide. After 30 years of war and 5 years along the peace process, Guatemala is currently opening its doors to reproductive health services for women.

The Ministry of Health and the Ministry of Education have established a working committee to coordinate efforts towards the development of family and sex educational materials to be used in schools.

Few NGOs, such as APROFAM, the local IPPF affiliate, and other private organizations have informal sex education courses or give talks upon requests of schools, but these may not be considered structured or formal sex education programs. Attempts have been made to import foreign sex education courses, for example from Mexico, Colombia and Costa Rica, but presently there is no single organization that may have a leadership in sex education in Guatemala.

3. Previous Population Council Experience with Adolescents.

Working under the hypothesis that local NGOs can provide quality and culturally appropriate reproductive health care to the rural indigenous population, thereby addressing a need unmet by the public sector, the Council has been providing technical assistance to networks of grassroots NGOs since 1996. This successful program and the networks that have been created provide an excellent mechanism for accessing adolescents from hard-to-reach indigenous populations.

Reproductive health among married and unmarried adolescents has become a growing concern among staff from local NGOs in recent years. In 1999 a group of local NGO representatives from the Council network made a study tour to Mexico to observe the work of Gente Joven (GJ), the adolescent program administered by MEXFAM. It was felt by all of the staff that their communities could benefit from implementing some of GJ's strategies, but they lacked the detailed knowledge and experience to move forward. A subsequent visit is currently being undertaken and there are plans to continue this South-South collaboration to build the capacity of Guatemalan NGOs to work with youth.

Program setting.

1. Chimaltenango

The department of Chimaltenango is located in the central region of the country covering a total of 1979 km² of territorial extension. It is located 54 kilometers from the capital city. The population of Chimaltenango is predominantly of Mayan origin (77.7 per cent); the population under the age of 14 comprises almost half of the total population (46.6 per cent). This statistic is typical of a young population, which is the case in Chimaltenango, where the median age is 16.9 years.

2. The educational system of Guatemala

The Ministry of Education of Guatemala (MINEDUC) defines as "school-age population" all children and youth from 5 to 19 years of age who are within the age range to attend school at a pre-primary level (from 5 to 6 years old), primary level (7 to 12 years old), or secondary school (basic school from 13 to 15 years old, and diversified high school from 16 to 19 years old.)

It was estimated that Chimaltenango had a total of 153,502 children and youth who were school-aged during 1995, a value that exceeded all other departments in the country during that year.

Of the total school aged population, 58.9per cent corresponded to primary and pre-primary levels, (from 5 to 12 years old), and 41.1per cent corresponded to the secondary school level (13 to 19 years old). Within this population, males made up a slight majority (50.9per cent), with respect to females (49.1per cent). The general trend is for the school population to decrease as age increases.

II. PROBLEM

The primary problem is that, under the current education system, primary and secondary schools do not provide family life or sexual education within their curricula. Rarely are parents a source of information for children; therefore, children lack formal information on such matters of sexual and reproductive health.

The lack of well-structured sexual education programs in schools leads to negative consequences in the lives of adolescents. Lack of information translates into pregnancies at young ages, a high incidence of sexually transmitted infections, high fertility rates at young ages, and, obviously, high rates of maternal and infant mortality. Uninformed of their elemental rights, children are often not aware that they can decide when to marry and when to have children.

As mentioned above, some NGOs have implemented, with some limitations, sexual education courses, primarily using imported texts and programs from other countries such as Mexico, Colombia, and Costa Rica. However, these materials must be adapted and focused on local problems and practices. Specifically, educational material should be focused on matters of family life, sexuality and reproductive health in a culturally appropriate manner. This can be accomplished through the participation of grass-roots organizations that are involved in the provision of education and health services.

III. SOLUTION

To find solutions to the above problems, the Population Council and a partner NGO, Renacimiento, conducted a study aiming to: (a) determine the acceptability and perceived need of a school-based sex education program directed to indigenous populations and (b) develop and field test of educational materials that may be accepted and institutionalized within the educational system.

Under this project, collaborating institutions conducted a survey aiming to determine the current levels of reproductive health knowledge and opinions about school-based sex education programs, among parents, students, teachers and school directors in the area of Patzun, Chimaltenango.

Based on survey results, this project developed and field-tested educational materials directed to students in the 5th and 6th grades of primary school, and the 7th, 8th and 9th grades of secondary school. The field test included nine educational centers, including public and private schools. The education program consists of a comprehensive training curriculum that includes information on family life and sexual education with a participatory approach.

The justification of this solution is that education, particularly sexual education in schools, provides an important source of information that children can use when making decisions about postponing the initiation of sexual activity, preventing unplanned pregnancies, and reducing the risks of contracting a sexually transmitted disease. School is frequently the only source of information for children and parents, especially among populations of Mayan origin, who have historically been excluded from social and economic development.

IV. OBJECTIVES

The general purpose was to contribute to the enhancement of reproductive health conditions of the Guatemalan population, specifically Mayan groups, through the introduction of family life and sex education in schools. The specific objective of this project was to adapt and test sexual and a short-term family education course in Guatemalan primary and secondary schools.

PROCEDURE

Reproductive health knowledge, attitudes and opinion survey

Study description

A survey was conducted to assess the current level of knowledge on reproductive health issues and determine the degree of acceptability and perceived need to establish school-based educational programs in Patzún. The survey was directed to school principals, teachers, parents and students of 5th and 6th grades of primary schools, and 1st, 2^d, 3^d grade of secondary school (7th, 8th, 9th grades) of ten (10) randomly selected schools. The age range of students was 9 to 16 years of age. Schools included public and private institutions, and the study included all the student population in the selected grades.

485 students, 235 parents and 58 teachers were interviewed during 5 weeks of field work, conducted in March, 2001.

Questionnaire

Three instruments were used to collect information. The instrument used to collect student information consisted of 12 sections of 37 closed questions, which had been previously validated. The sections were as follows: Socio-demographic characteristics, knowledge of the topics, attitudes toward sexual education, relationships with friends and others, exposure to STI/ AIDS, exposure to unwanted pregnancies, intentions, sources of supply, opinions on sexual education, worries, topics that they speak to parents about and desired sources of information.

The questionnaire for parents also included 12 sections, and a total of 35 questions. The sections were similar to that of the student questionnaire, particularly the following: Socio-demographic characteristics, knowledge of the topics, and attitudes toward sexual education. Other sections were focused on their child's or adolescents' in general: relationship with their children, perception of their child's exposure to STI/ AIDS and unwanted pregnancies, opinions about sexual education, worries about their child's life, topics that they speak to their children about, desired sources of information for their children, and attitudes toward family planning.

The questionnaire for teachers had 10 sections and 30 questions. The sections were similar to that of the parent questionnaire, but oriented toward students. An additional

section was necessary to determine teacher's comfort level in teaching certain sexual education topics.

Prior to interviews, an informed consent form was translated and read to all participants before proceeding with the interview. Privacy was kept through the conservation of respondents anonymity. For parents, the entire questionnaire was translated to Cak'quikel.

Parents, teachers and student questionnaires are included in Appendix 1.

Field work and sample obtained

Five interviewers (4 of which were Cak'quikel and spanish/monolingual) and two supervisors conducted all the data collection. Field work was done between March 12th and April 18th 2001. The methodology to collect information was through interviews to students and parents. Teachers filled out their own questionnaires. **After reading the** informed consent, and receiving approval from the interviewee, the interviews were conducted in a private place. Researchers had difficulty collecting the desire amount of interviews in some educational centers due to: a) absence or inability to contact parents; b) inability to contact teachers.

During the five weeks of fieldwork, 10 educational centers were visited: 5 from rural areas and 5 from urban areas. During these visits 485 students (54% men and 46% women) were interviewed. The distribution of ages and grade levels are presented in Table 1. A total of 58 teachers and 237 parents were interviewed, out of which 37% were fathers (87) and 63% were mothers. Three parents refused to participate in the interview and there were 103 failed attempts to locate parents in their homes.

Results

Age distribution by grade

Survey results showed that the age distribution per grade has a large variance, and is conspicuously different from other, urban and non-indigenous schooling systems. Specifically, the age range of the primary student population is wide, from 9 to 14 years of age. The age range of 7th to 9th grades is also wide, from 12 to 23 years of age. Table 1 below shows that, in the case of Patzun, a significant proportion of students in 5th and 6th grades are between 12 and 14 years old. This is a highly significant result, because it provides a clear indication that certain reproductive health topics, such as menstruation, early pregnancy and risks of STIs, should be taught from 5th grade and even earlier.

Table 1
Student Distribution by Age Groups and Academic Levels

Age	5th Grade	6th Grade	7th Grade	8th Grade	9 th Grade	Total
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Groups						
9-11	53%	16%	1%	0%	0%	11%
12-14	45%	84%	68%	49%	8%	51%
15-23	1%	0%	31%	51%	92%	39%
Total	77	64	146	98	100	485

Reproductive health knowledge

Only 22.4% of teachers, 8% of students and 4.3% of parents responded that sexuality is not exclusively defined as the ability to reproduce. Most parents and students, 54% and 69% respectively, did not know that a woman's fertile period starts with her first menstruation. 72.4% of teachers correctly responded that a woman could become pregnant after she has her first menstruation.

When asked about sexual abuse, students (64%), parents (82%), and teachers (80%) recognized that any sexual contact between a minor and an adult is considered sexual abuse.

Knowledge related to STI and HIV/AIDS is particularly high among teachers (see Table 2). Many students (51%) believe that one way of contracting these infections is by hugging. 49% of students, 65% of parents, and 83% of teachers responded correctly (desired response= NO) to the question: Can you tell if a person has a STI just by looking at them?

Table 2
Knowledge about Sexually Transmitted Infections (STIs) and HIV/AIDS
(The percentages presented below represent correct answers)

	Students	Parents	Teachers
One can contract AIDS just by hugging someone with AIDS	49% (no)	50%(no)	93%(no)
The virus that causes AIDS is found in the blood	66% (yes)	78%(yes)	91% (yes)
Young people can also contract AIDS	88% (yes)	92% (yes)	98% (yes)
You can tell if a person has an STI just by looking at them	49% (no)	65% (no)	83% (no)

The percentage of correct answers declines considerably when exploring knowledge about the correct way of using a condom. Only 24% of students and 51% of teachers know how to use a condom. Parents were not asked this question because it was considered to be a sensitive issue during validation.

Stance and/or risk perception of STI, HIV/AIDS, and unwanted pregnancies

There is a lack of knowledge in what concerns exposure of youth from the different educational centers to STI and/or unwanted pregnancies. Over 50% of all students, parents and teachers do not perceive such risks (see Table 3).

Table 3
The likelihood that youth from the educational centers that conform the sample will contract a STI, HIV/AIDS, or the likelihood that males will impregnate or females will be impregnated, according to interviewee's opinions

	Students	Parents	Teachers
It is likely that male students will contract an STI	44%	45%	53%
It is likely that female students will contract an STI	48%	45%	52%
It is likely that the male students will get a girl pregnant	42%	51%	51%
It is likely that female students will become pregnant	42%	51%	54%

Student, parent and teacher attitudes toward sexual education

60% of teachers, 30% of students and 24% of parents believe that condoms should be made available to youth. When asked if the delivery of contraceptives to youth should be prohibited, 68% of teachers, 32% of students, and 23% of parents did not agree (see Table 4).

Table 4
Opinions about some sexual education issues

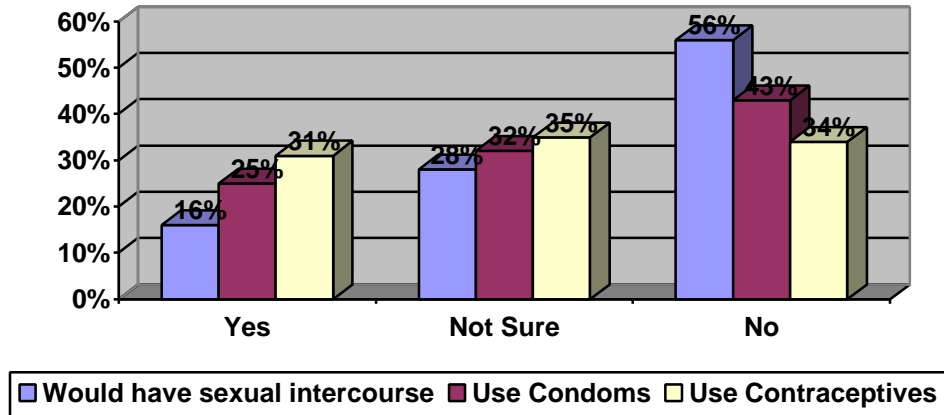
	Students	Parents	Teachers
Percent of interviewees that agree that women should remain virgins until marriage	80%	96%	81%
Percent of interviewees that disagree that the sale of condoms to youth should be prohibited	30%	24%	60%
Percent of interviewees that disagree that the sale of contraceptives to youth should be prohibited	32%	23%	68%

Students' Intentions

In this section the survey included questions about student's expectations about the future, and intentions about preventive health behavior. For example, the study asked whether they would have sex, should the opportunity arise; if they would use

contraceptives or condoms if they had sex. 16% of students would have sexual intercourse if the opportunity presented itself. 25% would use condoms and 31% would use contraceptives if they were to have sexual intercourse. On third of the students responded that they were unsure, while the rest would definitely not do any of the above.

Chart 1
Percentage of students interviewed that would have sexual intercourse and use condoms or contraceptives



Regarding intentions, they were asked about the number of children they wish to have. 61% of students wish to have between 2 and 3 children, 26% between 4 and 5 and 6% would like more than 6.

Sources of supplies

Only 12% of students interviewed know of a place where they can find contraceptive methods. The places most frequently mentioned were the hospital (8.5%), private clinics (8.5%), and pharmacies (7%). When asked whether they would seek out one of these places to solicit services, 66% (27) responded affirmatively. 11% (54 of 344) responded that if they needed contraceptives in the future, they would feel comfortable purchasing them at pharmacies.

Opinions about sex education in schools

Table 5 shows that 91% (235) of parents and teachers (58) and 82% (485) of students responded that they are in favor of sexual education classes in educational centers. 60% of students think that sexual education should be taught from middle school, 31% in primary, and 24% in high school.

Table 5
Percent of students, parents and teachers that agree or disagree with sexual education in educational centers

	Agree	Disagree	N
Students	82%	10%	485
Parents	91%	9%	235
Teachers	91%	9%	58

Teachers suggest that students should be taught the following topics: functioning of the human body (98%), unwanted pregnancies (91%), sexual intercourse (88%), contraceptive methods (74%), and condom use (67%). Over half of the parents agree that their children should be taught about these topics, except for the use of condoms, the percentage being 44% (see Table 6).

98% of teachers, 63% of students and 47% of parents interviewed manifested that they agree that sexual education will be useful for students. 63% of the parents interviewed manifested that providing students with sexual education may provoke a desire to begin an active sexual life. 35% of the students manifested this same worry, but 90% of teachers disagree with this statement.

Most teachers (90%), parents (70%) and students (62%) manifested that it is not a sin to speak about sexual education.

Table 6
Percentage of students, parents and teachers that agree that specific themes of sexual education should be imparted

	Students	Parents	Teachers
Functioning of the human body	87%	92%	98%
Sexual intercourse	71%	81%	88%
Unwanted pregnancies	57%	81%	91%
Contraceptive methods	51%	62%	74%
Use of condoms	47%	44%	67%

When the students were asked who would be the most appropriate person to convey these specific topics, they manifested a preference for health personnel and teachers for most of them, except for dating, where 41% of student prefer that their parents speak to them about such (see Table 7).

Table 7
Persons preferred by students to impart specific topics

Topics	Health Personnel	Teacher	Father	Mother
Functioning of the human body	40%	30%	12%	20%
Dating	7%	22%	41%	41%
Sexual intercourse	32%	30%	16%	26%
Unwanted pregnancies	40%	23%	14%	27%
Contraceptive Methods	50%	26%	10%	14%
AIDS and sexually transmitted infections	53%	28%	12%	13%
How to use condoms	61%	20%	7%	8%
Gender equality	19%	46%	20%	22%
Sexual rights	32%	39%	14%	19%
Domestic violence	19%	34%	29%	26%

Student Worries

Contracting STI, HIV/AIDS (96%), being victims of sexual abuse (92%) and the fights that student see within their homes (92%) are the relevant worries of students. These are followed by the consumption of drugs and/or alcohol (85%) and the consumption of alcohol by both parents, which is a worry of over 80% of the students interviewed (see Table 8).

Table 8
Most relevant worries of interviewed students

Problems	It worries me	It does not worry me
Consumption of drugs and/or alcohol	85%	15%
That someone will abuse me sexually	92%	8%
That I may contract and STI or HIV/AIDS	96%	4%
Consumption of alcohol by my father	85%	12%
Consumption of alcohol by my mother	84%	14%
Fights within my home	92%	8%

A worry that is also relevant is unwanted pregnancies. When separated by sex, 97% of female students are worried they may become pregnant and 88% of male students are worried that they may get a girl pregnant.

Family Dialogue

Despite student worries, only 20%, 3% and 2% of parents speak about the following issues with their children: alcoholism and drug addiction, how to prevent pregnancies, and STIs respectively. Other topics are not the subject of family dialogue (see Table 9).

Table 9
Which of the following topics do you speak to your child (parent) about?

	Student Responses			Parent Responses		
	Sometimes	Always	Never	Sometimes	Always	Never
STI/HIV/AIDS	29%	2%	69%	48%	3%	49%
Problem with your studies	51%	42%	7%	63%	30%	7%
How to prevent pregnancies	15%	3%	82%	24%	3%	73%
Gender equality	35%	9%	56%	49%	11%	40%
Future plans	48%	33%	19%	56%	24%	20%
Alcoholism and drug addiction	37%	20%	43%	50%	25%	25%

Desired sources of information

There is a preference from students for health personnel to be the ones to impart courses such as one on condom use (61%), HIV and AIDS (53%), contraceptive methods (50%), unwanted pregnancies and the functioning of the human body (40%) and sexual relationships (32%).

The second preference to deliver the above mentioned topics are teachers. In some cases the percentage of students who specifically request them increase such as: gender equality (46%), sexual rights (39%) and domestic violence (34%).

Students request for parents to speak to them about dating (41%), domestic violence, and gender equality. Mothers are favored by students with respect to fathers in topics related to unwanted pregnancies (27%), sexual intercourse (26%) functioning of the human body (20%), sexual rights (19%) and contraceptive methods (14%).

Teachers' comfort with sexual education topics

When placing topics of sexuality by most difficult to impart, teachers mention: the use of condoms (68%), contraceptive methods (56%), sexual relationships (47%), unwanted pregnancies (32%) and sexual rights (24%). Most other topics are not dominated in their entirety by those interviewed (see Table 10).

Table 10
How comfortable are you with teaching the following topics?

	Very comfortable	Not very comfortable	Don't know
Functioning of the human body	81%	14%	5%
Dating	91%	4%	5%
Sexual intercourse	49%	47%	4%
Unwanted pregnancies	63%	32%	5%
Contraceptive methods	35%	56%	9%
AIDS and STI	83%	12%	5%
Use of condoms	18%	68%	14%
Gender equality	88%	7%	5%
Sexual rights	59%	24%	17%
Domestic violence	77%	16%	7%

Development and field test of a school-based sex education program for indigenous populations

Survey results showed an acute need to implement sex and reproductive health educational programs, and a generalized acceptance for this kind of programs among parents, students, teachers and school directors.

The process of development of educational materials, and corresponding field test, included the following activities:

1. Development of a preliminary program describing the content suggested for 5th and 6th grades of primary and 7th, 8th and 9th grades in junior high school (1o, 2o, and 3o. Basico).
 2. Discussion and negotiation of topics to be included for each grade, among the following actors:
 - a. Collaborating NGO, Renacimiento
 - b. School District Supervisors
 - c. School Principals
 - d. Parents and teachers.
 3. Training of teachers to become sex education advisors in each participating school
 4. Six-week course teaching one lesson per week, with home-based or community-based activities to be completed during the following week.
 5. Pre and post measurement of reproductive health, family life and sex education topics amongst students.
-
1. Development of an educational program for 5th and 6th grades of primary and 7th, 8th and 9th grades in junior high school (1o, 2o, and 3o. Basico), and an instructor's manual to teach such course.

Following national and international standards and recommendations, the educational program included six generic topics, as follows:

- Human relations (communication)
- Human development
- Gender
- Health
- Reproductive health
- Sexuality

Relevant information on each topic area for each grade, was subject of much debate and requires further research. As an initial proposal, the following distribution of topics per area and grade was discussed with officers of the school system of Patzun and Renacimiento collaborators.

	Primary		Middle High (Basico)		
Topic	5th	6th	7th	8th	9th
Human relations	Communication with parents	Family responsibilities	Rights and intrafamily violence	Friendship	Community obligations
Human development	Self- esteem	Virtues and values	Leadership	Team work	Decision making during adolescence
Gender	Gender in school relations	Gender roles	Women at work	Job opportunities	Responsible parenthood
Health	Nutrition and hygiene	STD, STIs/ HIV/AIDS	STD, STIs, HIV/AIDS	Addictions	Using health services
Reproductive health	Male and female reproductive tract	Menstrual cycle, ejaculation	Pregnancy, delivery and postpartum care	Contraceptive methods	Basic messages of reproductive health
Sexuality	Puberty and adolescence	Risks of starting sex life	Early pregnancy	Consequences of sexual activity during adolescence	Consequences of sexual activity during adolescence

Ideally and considering the needs of indigenous populations, students should receive information about most of the above topics at the earliest possible grade, especially considering the high drop-out rates which are observed after primary school. However, as an initial step, the process of introduction of sex education in indigenous **communities** needed to be adapted to a traditional and expectant community. It is expected that, during

the course of development of this initial step, course contents and implementation will be further refined.

Course contents and educational materials were developed following recommendations from WHO (Programming for Adolescent Health), the FOCUS program (Guide for Curriculum Development), and established educational programs such as MEXFAM's, IMIFAP's and textbooks from PROFAMILIA/Colombia and other partner organization.

Drawing from the field test experience, the base course will be revised, refined and further developed.

2. Discussion and negotiation of topics to be included for each grade, among the following actors:
 - a. Collaborating NGO, Renacimiento
 - b. School District Supervisors
 - c. School Principals
 - d. Parents and teachers.

The main problem in the process of course development and the introduction of sex education in the Guatemalan educational system, is to manage and administer acceptability of the contents among both parents and schools. Such process of introduction required a training of school principals and teachers to enable them to respond to parents' anxieties and worries concerning what information exactly their children would be receiving during classes. Furthermore, meetings with parents during, at least three stages of course implementation: at the beginning, to explain the course contents, during the process of course implementation (to inform them about progress), and at the end (to inform about project results and discuss problems and difficulties encountered).

The whole bargaining process proved a key to success and requires further refinement, to develop national guidelines that instruct personnel of the educational system, as to how to introduce and implement these type of courses in a progressive and cumulative manner.

Few incidents were reported during course implementation. Reportedly, two parents objected to their children receiving sex information at schools. School principals agreed that their children may not take the course, should they object, but reiterated that the course would not be cancelled due to their objections.

There was one reported case in which parents intruded in class, during the course of one lesson, and searched for suspicious materials being distributed by instructors. Without further explanation, they withdrew from the classroom. The school principal later reported that an unidentified instructional video that they (the school) showed in anticipation to the start of the course, may have caused some suspicions from parents. No further questioning or objections were reported at this school.

Among primary school students, one girl student reportedly said that she was too young to listen sex and reproductive health talks.

In all three cases above, course instructors report that objecting parents and students turned out to be most enthusiastic and participatory during the final phases of the program.

3. Training and in-service training of teachers to become sex education advisors in each participating school

A two-day training workshop was conducted in May, 2001 with 12 selected teachers, to review the course contents and provide general guidelines to implement sex education courses. Lecturers included Population Council staff in Guatemala, including qualified doctors, with extensive experience in training on reproductive health and sex education topics. Participants included prospective teachers and school principals that could become sex education counselors in their own schools.

As a result of this workshop, seven teachers and advisors were selected to implement the course, with assistance from Council staff. Selected teachers were invited to implement some lessons, to start an induction process by means of which they could become further interested in continuing this endeavor in future academic years.

4. Six-week course teaching one lesson per week, with home-based or community-based activities to be completed during the following week.

The six-week course was implemented during the months of September and October, 2001 with the participation of trained educators with experience in family life and sex education courses.

Course instructors included:

- Francisco Mendez
- Maria Dolores Yax
- Claudia Aguilar

As mentioned above, school teachers participated discretionarily in some of the lessons, but the actual responsibility was under the Population Council's staff.

Course supervision was conducted by Francisco Mendez and Dr. Berta Taracena.

5. Pre and post measurement of reproductive health, family life and sex education topics amongst students.

To assess learning achieved through participation in this program, this project developed and applied pre and post intervention knowledge questionnaires. Questionnaires included

4-5 items for each of the six course topics. Based on these items, knowledge scales in the range of 0 to 100 points were developed, as to grade knowledge about each topic using similar scales to grades in schools. Questions had a true/false and multiple choice format, and included increasingly difficult questions, depending on the grade level.

Knowledge questionnaires applied for each grade before and after the intervention are included in Appendix 2.

Reproductive health knowledge

Table 11 shows pre and post test results on reproductive health topics. Results show that pre-intervention levels of knowledge were variable prior to the course implementation. While 7th graders showed low average grades, students in 9th grade showed relatively high levels of knowledge. Note that levels of knowledge of reproductive health issues, steadily increase during secondary school years.

Learning achieved through participation in the course may be observed in the last column of table 11. Results show that the highest level of learning was achieved among 8th grades, who increased the average score in 39 points to 54. Significant progress was also observed in 6th grade, where scores increased in 35 point to 72. Learning achievements in this area were similar among 5th and 7th graders, around 32 points. The lowest learning achievement was observed among 9th graders, who showed an improvement of 23 points over 66, to reach 89.

Learning differences observed in table 11 are NOT statistically significant, in a two-way analysis of variance. This means that, although there was an important effect of program participation, there is no statistical evidence of an impact of the intervention taken as a whole. One way analyses of variance of pre and post scores in each grade (five comparisons) show statistically significant improvements in every grade.

Table 11
Pre and post score per grade: Reproductive Health Knowledge
Patzun Sex Education Project. September, 2001

	Primary		Secondary		
	5th	6th	7 th	8th	9th
Pre-test	30	37	6	14	66
Post-test	64	72	38	54	89
Diferencias	33	35	32	39	23

Integral adolescent health knowledge.

This section included the following topics: nutrition and hygiene for 5th grade students, STDs/HIV for 6th and 7th grade students, addictions for students of 8th grade and use of health services for 9th graders.

According to test results shown in table 12, pre-intervention scores were 42 points among 5th grade students, who reviewed nutrition and hygiene concepts, 35 and 25 points respectively for 6th and 7th graders, who studied HIV/AIDS related issues, 29 points among 8th graders, who dealt with additions, and 67 points among 9th graders, who discussed use of health services.

Study results show progress of 35 points among children in primary grades, to 77 points among 5th graders, and 64 points among 6th graders. In the case of post-primary years, observed gains varied from a low 17 points among 9th graders, to 29 points, among 8th graders.

Table 12
Pre and post score per grade: Integral Adolescent Health Knowledge
Patzun Sex Education Project. September, 2001

	Primary		Secondary		
	5th	6th	7 th	8th	9th
Pre-test	42	29	33	36	67
Post-test	77	64	58	65	84
Differences	35	35	25	29	17

Sexuality

In this section, included puberty and adolescence concepts for 5th graders (9-14 years of age), risks of starting sex life for 6th graders (10-15 years of age), risks and problems related to early pregnancy for 7th graders, and consequences of sexual activity during adolescence for 8th and 9th graders.

Study results show that there was some degree of knowledge among all students on the course topics, but insufficient to face sexuality issues during adolescence. Primary school students, scored 30 points on their respective tests (puberty issues for 5th graders and risks of starting sex life for 6th graders). Post-primary students, scored 52, 43 and 66 points among 7th, 8th and 9th grades respectively.

Through course participation, 5th grade students increased their knowledge about puberty changes in 34 points, to a score of 64. Students in 6th grade showed a marginal increase of 6 points to 36. Such result indicates that this particular lesson requires a thorough revision to adequately address the issue of sex initiation among children who, according to demographic surveys, will start their sex life in a near future.

A most satisfactory result is that early pregnancy topics and risks of sexual activity during adolescence increased significantly among secondary students, to reach scores of 90, 77 and 88 point in post-tests.

Not surprisingly, sexuality topics showed to be most appealing to students, attracted their attention and prompted questions. Sensitive issues were successfully discussed, as table 13 below shows.

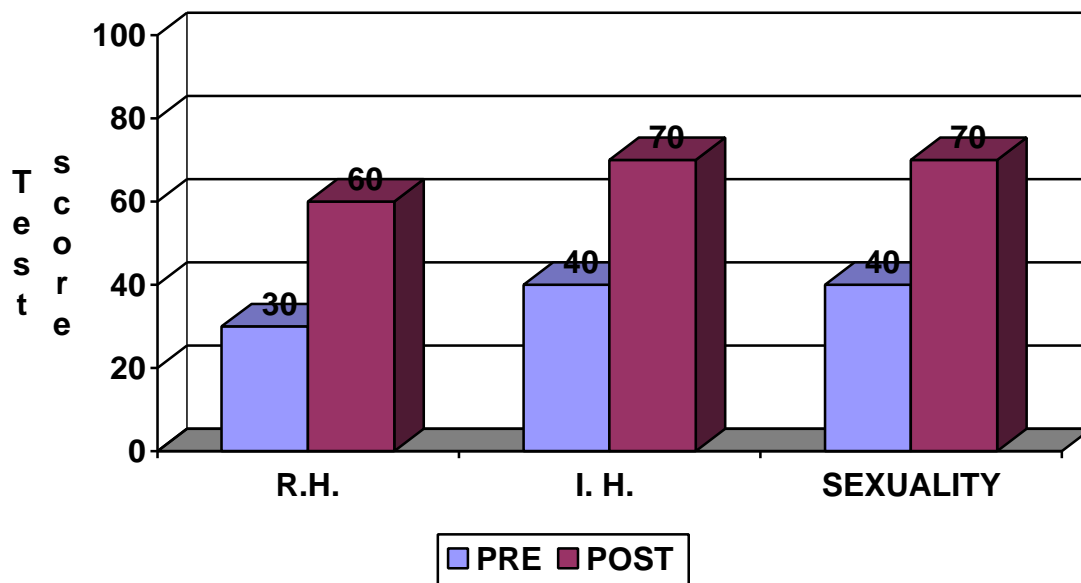
Table 13
Pre and post score per grade: Sexuality
Patzun Sex Education Project. September, 2001

	Primary		Secondary		
	5th	6th	7 th	8th	9th
Pre-test	30	30	52	43	66
Post-test	64	36	90	77	88
Difference	34	6	38	34	22

Average scores for all grades combined in each of the three main sections of the program is shown in Chart 2. Coincidentally, a gain of 30 points was achieved in all three topics. Average pre-intervention scores were 30 points on reproductive health issues, and 40 points in integral health and sexuality.

Probably the most meaningful results of this project is that test scores reached 60 points in reproductive health issues and 70 points in integral health and sexuality issues.

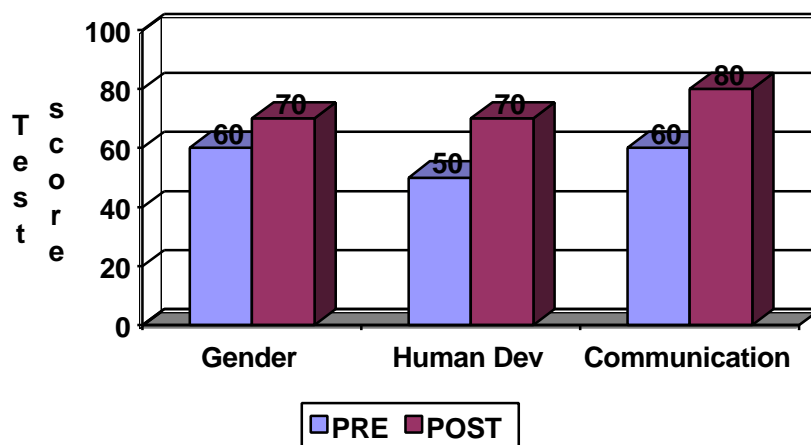
Chart 2
Pre and post-intervention scores per topic all grades combined: Knowledge about
Reproductive Health, Integral Health and Sexuality.
Patzun Sex Education Project. September, 2001



Knowledge of Communication, Human Development and Gender Issues

Chart 3 shows pre and post-intervention scores related to the sections on Gender, Human Development and Communication for all grades combined. Gender awareness increased from 60 to 70 points, Human Development scores increased from 50 to 70, and Communication/Human Relations increased from 60 to 70 points.

Chart 3
Pre and post-intervention scores per topic all grades combined: Gender awareness,
Human Development and Communication/Human Relations.
Patzun Sex Education Project. September, 2001



These topics were most appealing for primary school students. Fifth grade students, who learned about gender roles in school, self-esteem and intra-family communication, increased their test scores in 26 points, from 45 to 71 points. Very significantly, 7th graders, who studies intra-family violence, leadership and female work, showed an important progress of 23 points, from 47 to 70. Similarly, 8th graders, who reviewed such topics as team work and gender roles at work, showed an improvement of 23 points in test scores.

Gender, human relations and communication topics are more difficult to discuss with 9th graders. Although test scores showed an important advancement of 15 points in this grade, the subjective appreciation of instructors is that these lessons require substantial revision to make them more appealing and interesting to students.

Selected topics among primary school students

The sex education program proved effective to inform students about key issues related to sex education and family life. Some of the most significant changes observed were the following:

1. Are sex and sexuality equal?.

Prior to intervention, 80% (n-204) of students responded that sex and sexuality are similar concepts. After the intervention, 29% of students correctly differentiated between both concepts.

2. Ways of transmission of STIs.

More than 60% of students are unaware of ways of transmission of STIs: 40% think that hugging a person with an STI or HIV/AIDS may be a way of getting the disease, one-

half responded that STIs always show external symptoms easy to recognize. As shown in chart 3, 81% of students responded correctly after the intervention.

Chart 4
Pre and post-intervention scores about selected topics: primary students.
Patzun Sex Education Project. September, 2001



$p < 0.00$

Selected topics among secondary school students

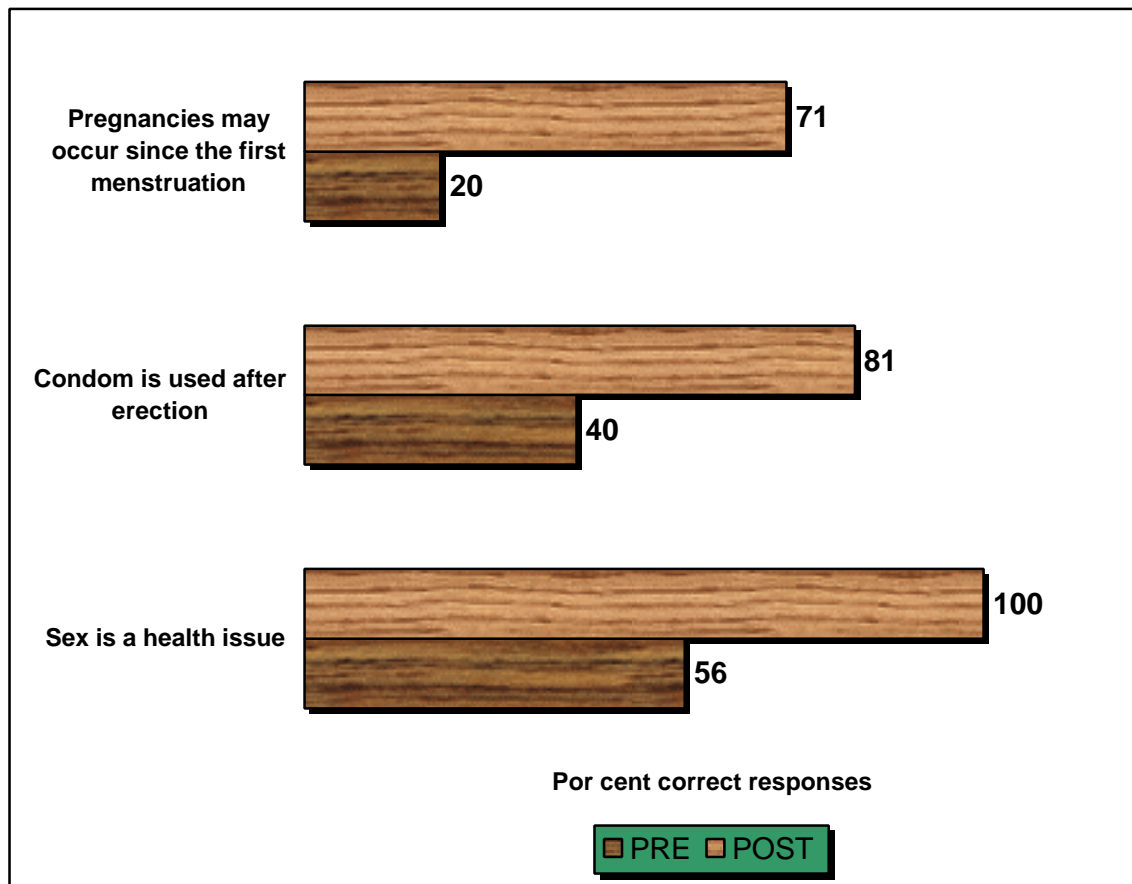
Only 20% of secondary students was aware that a pregnancy may occur since the moment a girl has her first menstrual cycle. Most significantly, this fraction increase to 71% after the course.

In spite of the fact that students are aware that condoms may be used to prevent STIs, only 40% responded correctly that a condom is used after erection. Test scores showed that, after participation in the course, 81% were aware of how a condom is used.

Prior to the course, 55% of students did not perceive sex education as as a part of reproductive health. After the intervention, all students recognized that sex education is a health issue. This is a very important result because, traditionally, sex education has been considered part of religious and family education. The fact that sex and sexuality

education is currently considered a health problem as well, is a major accomplishment of this project.

Chart 5
Pre and post-intervention scores about selected topics: secondary students
Patzun Sex Education Project. September, 2001



Parental reaction

The baseline survey, conducted among teachers, parents and students, showed that 90% of parents are worried about their children's sex life, and approve that sex education is provided at schools. During the course of implementation of the educational program, parents become increasingly aware of the topics needed and are naturally concerned about how sensitive topics may be discussed in class. However, this project demonstrated that adequate parental involvement, facilitates rather than limit program implementation.

As mentioned earlier, only three cases of parents objecting or being suspicious were reported. School principals were key actors to explain the objectives and methodology of the program, and their determination to establish such courses in-class, was a decisive factor for project success. During the planning stages of the program, teachers reported

having made previous and unsuccessful attempts to teach sex education in their schools. In one case, the course was cancelled because one parent objected. Public discussion of the event led to the conclusion that cancellation of the course due to the objection of a single parent was unfair to the rest of students and parents that see a need for their children to receive this type of information. Such exchange of viewpoints enabled teachers and school principals to adequately address objecting parents, as was later shown during the process of implementation of the educational program.

During parental meetings, parents expressed their concern that it is ultimately their responsibility to instruct their children about sex and reproductive issues. However, they admitted, they refrain from discussing these issues with their children out of embarrassment or lack of knowledge. Naturally, they expressed interest in learning themselves what their children learn in this course, and complied with the schools' initiative to introduce these topics in-class. Parents admitted that it is better for their children to learn these topics at school rather than in the streets.

VIII. DISSEMINATION AND INSTITUTIONALIZATION

The study's results were disseminated at three levels:

- At a local level: A presentation was carried out in three different sessions to students, teachers and parents.
- At a regional level: with directors of the major educational establishments, education supervisors, and NGOs.
- At a national level: with MINEDUC, PRONEBI, PRONADE, and NGO decision-makers.

Trained teachers are expected to replicate the sexual education courses in all the educational centers in Patzun, and that the content is incorporated into the schools' curricula. The involvement of Renacimiento will be important to give follow-up to training workshops with technical support from PC.

IX. DISCUSSION AND CONCLUSION

Common beliefs dictate that indigenous parents, teachers and students are reluctant to listen to sex education messages. Experts argue that cultural, religious and community barriers constraint the implementation of sex education programs in indigenous communities and even fear violent reactions against teachers talking about sexuality to young children. Enthusiasts dismiss school-based sex education programs as "traditional approaches," unable to reach the most marginal groups and ineffective to achieve change. Religious groups organize meetings, conferences and lunches to oppose schools interested in preventing unwanted pregnancies and reducing STIs.

However, this study shows an acute need and a general acceptability of school-based sex education programs among students, parents and teachers. The baseline survey showed that parents, teachers and students are clear and aware of the risks and dangers of early pregnancy, STIs and HIV/AIDS. They understand from experience the negative consequences of ignoring basic facts of preventive health. Different from their parents, children expect to study to the highest grade possible, marry late, have two or three children in the future, and wish to know how to achieve these aims. Parents wish similarly for their children, and accept that, they lacking enough knowledge and sensitivity to address these issues with their children, school may inform and educate them on this regard.

This project has accomplished two tasks: (1) it has initiated a process of introduction and development of sex education in an indigenous community and (2) it developed a sex education materials which had a demonstrable impact on the level of knowledge of students about key elements of sex and family life.

Naturally, the educational program is NOT fault proof. Although program materials follow national and international norms and recommendations, they understandably need development and refinement. Some lessons proved clearly inadequate for the corresponding grade. Important questions were missed during the baseline survey and course evaluation. A full-scale test of the program and course is still necessary and the intervention was conducted in an extremely short time. Collaborating teachers require further training to adequately remain as counselors at schools. No preparations were made to continue and institutionalize the course.

Still, this project opened ground to continue developing a sex education program adequate for indigenous populations and strengthen the capacity of schools and the schooling system to teach basic skills for life to students, and to adequately respond to community, family and individual needs.

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REPORT 4.

**THE POPULATION COUNCIL
IN-HOUSE OPERATIONS RESEARCH REPORT
COOPERATIVE AGREEMENT No. 520-0357-A-00-4169-00**

TITLE: Reproductive Health Promotion for Women Victims of Violence and Rape

MANAGING INSTITUTION: The Population Council

IMPLEMENTING INSTITUTION: La Defensoria de los Derechos de la Mujer, Procuraduria de los Derechos Humanos

COUNTRY: Guatemala

PRINCIPAL INVESTIGATOR: Dr. Berta Taracena

PROJECT COORDINATOR: Licda. Miriam Cuyun de Contenti

PC STAFF RESPONSIBLE: Dr. Carlos Brambila

START DATE: July 1, 2000

END DATE: October 30, 2001

DURATION: 16 months

REPORT DATE: November 30, 2001

Reproductive Health Promotion for Women Victims of Violence and Rape

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Reproductive Health Promotion for Women Victims of Violence and Rape

SUMMARY

This aim of this study was to improve the quality of care and introduce emergency contraception (EC) services for women who are victims of violence or rape. Two intra-family violence and reproductive health opinion surveys were conducted among personnel of the Human Rights General Attorney Office (including social workers, psychologists, advisors and technical personnel), and of the justice system of Guatemala (including judges, forensic doctors who provide care for victims of violence and rape, and support or office personnel). One workshop on EC for key decision makers in Guatemala was conducted in July, 2001 and five additional EC workshops were conducted including 100 employees of the justice system. It is expected that trainees will inform women who are victims of rape about the possibility of avoiding an unwanted pregnancy through the use of EC.

Surveys conducted aimed to understand how personnel from the justice system think about intra-family violence, how they make subjective appreciations of the cases being denounced, and whether or not they would accept that operators of the justice system and the Human Rights General Attorney Office provide information about emergency contraception to victims of rape.

Survey results show that, in general, operators of the justice system are aware of what violence against women entails, but there is not a widespread consensus that this may be diminished through their active intervention. There exists a generalized acceptability of emergency contraception and a recognized need to inform victims of rape about this method. Reportedly, less than 7 per cent of personnel of the justice system, would oppose providing such information. The conclusion is that there are favorable grounds to introduce EC as routine information to victims of violence, but more training of personnel involved is required. Such training requires including basic information about intra-family violence dynamics and, necessarily, as one of the surveys conducted shows, training on gender issues.

I. INTRODUCTION

The Country Setting

Guatemala is a Central American country with a population of approximately eleven million inhabitants. The Total Fertility Rate is 5.0 (ENSMI 1998-9) and the contraceptive prevalence among women in union is 38.2%, reflecting the weakness in both the public and private family planning services offered. Maternal mortality is also high, estimated at 190 - 200 per 100,000 live births.

When the 36-year civil war ended in 1996, the issue of human rights came to the forefront, including women's rights. That same year a law was approved to "prevent, sanction and eradicate domestic violence." The Defensoria de la Mujer was founded in 1991 and made official in 1998 within the government's Office of Human Rights with the responsibility to support and promote actions, programs and projects that contribute to the process of gender equality in Guatemalan society.¹ The Defensoria has five principal areas of action: 1) education and promotion, 2) attention to women victims of violence and aggression, 3) social and economic rights, 4) strengthening of the network of sub-offices in the departments, and 5) legal-social actions.

The Director of the Defensoria is Miriam Cuyun de Contenti. She directs a program that works directly with women victims of violence. The Defensoria recognizes seven types of violence: psychological, physical, patrimonial, sexual, rape, workplace, and sexual harassment. In 1999, the Defensoria received 5,191 reports of violence from women throughout the republic and the program in the capital treated 405 women, principally with psychological counseling. The Defensoria has also worked with law enforcement and medical personnel who come into contact with women who have been victims of violence. The program has not offered to date reproductive health care to the women victims of domestic violence or emergency contraception to rape victims.

The program for women victims of violence operates in the capital city and 10 regions of Guatemala: Retalhueu, Coatepeque, Quetzaltenango, Coban, Chimaltenango, Peten, Izabal, Progreso, Solola, and Jalapa. Each has a regional coordinator who works with groups of women on mass media promotion of women's rights, self-help groups, and training for police and judges. In Guatemala City there is an additional program of psychological care that involves psychology student interns from the University.

The system for women who have been raped or are victims of domestic violence is excessively complicated and little oriented to the needs of the woman. A woman must go to the Public Ministry to make a complaint. There she is often sent from one window to another. There is no privacy when she reports the details of the rape or abuse. If she has been raped or physically abused, she must be examined by a forensic medicine specialist, who is available a maximum of four hours daily; the diagnosis of any other physician is unacceptable for legal purposes. It is at this point where the woman may be referred to the program of the Defensoria de la Mujer. Then she is sent to the prosecutor for women (Fiscalia de la Mujer), and from there to a judge who describes the process in detail and generally in a manner that is intended to discourage a woman from continuing with proceedings. All through the process, there is little

¹Procurador de los Derechos Humanos Defensoria de los Derechos de la Mujer. *Ley Para Prevenir, Sancionar y Erradicar la Violencia Intrafamiliar*. Decreto 97-96 del Congreso de la Republic de Guatemala. 1999.

to no privacy or sensitivity to the woman as a victim with a variety of health, psychological and legal needs.

Domestic Violence, Rape, and Intervention

Domestic violence against women is a worldwide threat to the health and well-being of women. Studies in several countries of Latin America demonstrate the prevalence. For example, in a 1992 study in Chile (Larrain, 1994) conducted among women 22 to 25 years of age, 60% reported they had suffered violence from their partner. In a 1990 national study in Colombia 33% of the women reported they had suffered psychological violence (Profamilia, 1990, in Heise et al., 1994). Other studies in Mexico, Costa Rica, and Nicaragua confirm the widespread nature of this phenomenon.

In the Convencion de Belem do Para (Comite de America Latina y el Caribe para la defensa de los derechos de la mujer, 1994) various Latin American countries identified this threat and began to carry out actions to classify domestic violence as a crime for which the perpetrator could be punished. Nevertheless, it continues to be a problem that few talk about in public, not even the victims. In 1999 the Defensoria studied 405 cases to determine the prevalence of various types of abuse and found that 48% had been psychologically abused and more than 12% were sexually abused, including rape.

Pregnancy is considered a risk factor for domestic violence since according to statistics in the United States and Mexico abuse frequently begins or gets worse during this period. In developing countries the woman's precarious health condition may make the impact of the violence more serious during pregnancy since women frequently suffer from malnutrition, lack of access to health services, etc. One study in Mexico (Valdez and Sanin, 1996) found that women who were victims of violence during pregnancy had three times more complications during birth and the immediate postpartum period than women who were not mistreated. The effects of mistreatment during pregnancy are also emotional and involve greater levels of depression, anxiety, and feelings of isolation.

Health care and legal personnel have certain beliefs, myths, and traditions related to women, marriage, family, and violence, some of which impede recognition of the problem and their responsibility to intervene. Nevertheless, it is crucial that they understand the importance of their intervening and receive orientation in how to do so. Their intervention may be crucial in the survival or quality of life of the woman who has been raped or abused.

In many countries special protocols have been developed to care for the woman who has been raped, offering her privacy, emergency contraception to prevent a pregnancy as a result of the rape, and treatment by a woman physician. The only special services offered in Guatemala to a woman who has been raped are found in the program of the Defensoria de la Mujer, but referral to this service is not universal, and the program is poorly funded and lacks some basic elements of care, such as emergency contraception. The Defensoria offers the only psychological assistance that women receive within the justice system, but lack of education in reproductive health has limited the program's ability to assist women in this important area.

Emergency contraceptive pills are a method that a woman can use to avoid a pregnancy after an unprotected or forced sexual relation. Although progestogen-only pills are proving to be more effective in preventing conception in emergency situations, combined oral contraceptives are also effective. The pills must be begun within the first 72 hours after a rape, the sooner the better. The pills work to prevent

conception; they do not interrupt an established pregnancy. Although emergency contraceptive methods have been known for a quarter of a century, they have not been widely used around the world until the 1990's for many reasons: international organizations did not attach much importance to their use until recently, they have not been included in official norms for delivery of reproductive health services and treatment of rape victims, and above all because of an inaccurate association of emergency contraception with induced abortion. Nonetheless, emergency contraception is a crucial intervention that should be offered to all women who are victims of rape, as well as contraceptive services for women who continue to be at risk.

II. PROBLEM STATEMENT

Violence against women is believed to be widespread in Guatemala. In a Population Council study conducted in 1997 among women in the highlands, nearly a third of respondents cited domestic violence as a serious problem in their communities.² Although there are no reliable statistics on the incidence of rape in Guatemala, it is generally believed to be widespread also. The judicial system treats women who are victims of violence or rape in an insensitive manner, with a lack of sensitivity and knowledge of the options for providing integrated care on the part of judges and forensic physicians. The result is cumbersome and insensitive legal processes executed by uninformed justice personnel, and a scarcity of needed services for women victims.

III. PROBLEM SOLUTION

The Defensoria de la Mujer will incorporate a program of reproductive health and gender, particularly as these subjects relate to violence and rape, in its work in the capital and the interior of the country. After training its own staff (for counseling and referral), the Defensoria will conduct a study of knowledge, attitudes, and practices among personnel of the justice system, specifically judges and forensic medicine specialists. The results will be used to raise the consciousness of the justice personnel concerning the need to improve the system for treating women victims of rape and violence. The program will provide training in counseling for reproductive health and gender, and for the forensic specialists in how to educate a woman in prevention of a pregnancy from rape during a forensic exam.

IV. OBJECTIVES

The general objectives of this operations research study is to improve the quality of care for women who are victims of violence or rape. The specific objectives are to 1) include attention to the reproductive health needs of women who participate in the program of the Defensoria de la Mujer in 10 regions and the capital, 2) sensitize and train personnel in the justice system to the gender and counseling for reproductive health needs of women victims of violence, and 3) to raise consciousness within the justice system of the need to improve the processes of the justice system for attention to women victims of violence and rape.

The outcomes are expected to be: 1) reproductive health education and referrals for services in activities of at least half the regions in which the Defensoria has a program, 2) increased referral to the Defensoria

²Population Council. *Informacion de Linea de Base sobre Cuatro Proyectos ONG en el Altiplano de Guatemala*. Guatemala, September 1998, p. 22.

for women victims of violence and rape, and 3) counseling for emergency contraception provided either by the Defensoria or the forensic medicine specialists.

V. ACTIVITIES.

The project was conducted in four stages, as follows:

1. Survey to assess knowledge, attitudes and opinions about reproductive health issues, with emphasis on emergency contraception, among personnel of the Human Rights General Attorney. The survey was conducted amongst 28 out of a total of 98 workers of the PDH, including social workers, psychologists and PDH field workers.
2. Three-day training workshops of PDH personnel on reproductive health matters. During November, 2001 two workshops were conducted with the participation of 50 field workers of the PDH. Workshop topics included: (a) adult education concepts and principles, (b) sexual and reproductive rights, (c) anatomy and physiology of reproduction, (d) contraceptive methods, (e) emergency contraception, (f) interpersonal communication and counseling. Participants included educators, coordinators of the Defensoría de la Mujer (Women's General Attorney) and psychology students. The second workshop was attended by representatives of the Justice System of Guatemala (3 psychologists, one doctor of the Victim's Attention and three lawyers of the General Attorney Office).
3. Survey to assess knowledge, attitudes and opinions about gender issues, intra-family violence and reproductive health issues, among personnel of the justice system. The survey was conducted amongst judges, forensic doctors and support personnel working at the field offices of the justice system.
4. Three one-day workshops on intra-family violence, gender and emergency contraception with forensic doctors. In Guatemala there are 50 forensic doctors, that are responsible of providing medical attention to victims of violence and raped women. Topics included were: (a) violence as a public health problem, (b) presentation of survey results: tolerance of intra-family violence, (c) emergency contraception for victims of rape, (d) needs assessment of emergency contraception services at public justice offices.

VI. TRAINING ON EMERGENCY CONTRACEPTION

During the month of November, 2000 two reproductive health training of trainers workshops took place with personnel from the Human Rights General Attorney. 25 employees participated in each workshop, making a total of 50 participants.

Participants included educators, coordinators of the Women's Advocacy Commission, and psychology students. Representatives of justice sector institutions participated in the second workshop (3 psychologists from the Public Ministry, a doctor from the Victim's Care Unit of the Public Ministry, 2 lawyers from the General Attorney's Office, and a lawyer from the Judicial Branch).

Workshops were 3 days long and they covered the following topics:

- a) Principles of adult education
- b) Sexual and Reproductive Rights
- c) Physiology of the reproductive tract
- d) Contraceptive methodology
- e) Emergency contraception

f) Interpersonal communication and counseling

At the workshop's end the participants prepared skits in which they applied the knowledge they learned to everyday issues with victims of violence and rape at their workplace. The skits were very emotional. During workshop evaluation, participants emphasized the need to provide integrated services to these women. Future plans to train operators of the judicial system resulted as a final product.

As part of the EC training activities conducted under this project, a facilitator course on emergency contraception took place in which 28 people participated including psychologists, lawyers, and educators from the Human Rights General Attorney, a doctor from the Victim's Care Unit of the Public Ministry, the Chief of Forensic Medicine of the Judicial Branch, doctors from the Gynecology and Obstetrics Association and doctors from the Guatemalan Association of Women Doctors.

The course was taught by Dr. Raffaella Schiavon from the Population Council Regional Office for Latin America and the Caribbean and Angeles Cabria from the Pacific Institute for Women's Health and president of the Latin-American Consortium on Emergency Contraception.

VII. SURVEY OF REPRODUCTIVE HEALTH KNOWLEDGE AMONG PDH PERSONNEL

Questionnaire

The survey directed to personnel of the Human Rights General Attorney office (*Procuraduría de Derechos Humanos, PDH*) attempted to assess knowledge, attitudes and opinions about reproductive health issues, with emphasis on emergency contraception. More specifically, topics included in the questionnaire were the following:

- (1) Sexual and reproductive rights,
- (2) Anatomy and physiology of reproduction,
- (3) Contraceptive methods,
- (4) Emergency contraception.

Sample

The sample included 28 out the 98 field workers of the Women's General Attorney Department (WGAD) of the Human Rights General Attorney Office. Respondents were educators, coordinators and psychology students working for the WGAD.

Field work

Field work was conducted by five trained interviewers selected among university Law students. Law students were selected because the sample population corresponds to the Justice System of Guatemala. Interviews were conducted during May-June, 2000 in five Departments of Guatemala. Respondents were selected amongst

Results

The study showed that 70% of the respondents are unaware of family planning and emergency contraception. 84% know some basic concepts of STDs, including HIV/AIDS. 80% of personnel interviewed thought that it is important to provide reproductive health information at public justice offices, specially about emergency contraception (after a brief explanation about the method) to victims of rape. Similarly, 80% expressed interest in learning more about the topic.

Table 1. Knowledge of reproductive health issues amongst personnel of the Women's General Attorney Department.

Topic	Position						Total	
	Coordinator (%)		Educator (%)		Psychology student (%)		(%) Correct	(%) Incorrect
	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect		
Reproductive health	44	56	41	59	29	71	41	58
STDs-HIV/AIDS	82	18	79	21	95	5	82	18
Emergency contraception	64	36	45	55	29	71	34	66

Results show that, in general, personnel of the WGAD knows in general about STDs and HIV/AIDS, but knowledge about reproductive health matters and emergency contraception is more scarce. While 82% of the interviewees responded correctly to relevant questions about STDs and HIV/AIDS, only 41% were able to provide correct answers about basic questions on reproductive health issues. Only 34% have heard about emergency contraception.

Survey results show that 93% of those interviewed are familiar with oral contraceptives, and 78% consider them a good method. 53% of interviewees are familiar with emergency contraception and 24% consider that it is a good method. After reading a short description about emergency contraception, 79% believe that it should be made available in Guatemala, 65% believe this method can be offered to the women who recur to their institutions, and 47% believe that within their program or instance, there is someone who can provide this method.

VII. INTRA-FAMILY VIOLENCE AND EMERGENCY CONTRACEPTION SURVEY AMONG PERSONNEL OF THE JUSTICE SYSTEM

Questionnaire

The survey consisted of five sections that covered the following: general data, definition of intra-family violence, beliefs about intra-family violence, perception about the quality of services offered, and opinions about gender equality.

In particular, the survey aimed to learn the opinion of personnel of the justice system about the following topics:

1. What should be considered intra-family violence?
2. Should a single aggression may be considered a case of intra-family violence, or it needs to be repeated to be considered so?
3. Is it possible to combat family violence?
4. Do women prompt violent acts from men?
5. What is their opinion about gender equality?
6. Should men and women have equal opportunities?
7. Should married women have economic independence?
8. How are gender equality opinions related to tolerance of violence against women?

Field work

Three interviewers were trained in techniques and rules for administering surveys. Interviewers were selected among university Law students. Law students were selected because the sample population corresponds to the Justice System of Guatemala. Interviews were conducted during May-June, 2000 in five Departments of Guatemala.

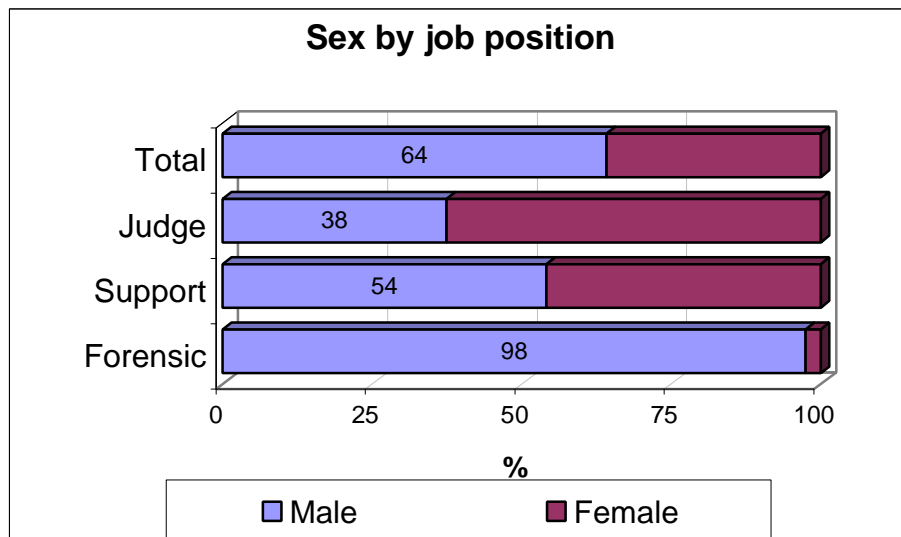
Interviews took place between April 2nd and 6th, 2001 in 8 family courts in Guatemala, Mixco and Amatitlan. 87 judicial operators were interviewed, including 8 judges, 40 forensic doctors, 111 support personnel, such as receptionists, technicians, secretaries and officers). The total number of respondents was 159 persons working the justice system in Guatemala City and surroundings.

Results

Sample obtained

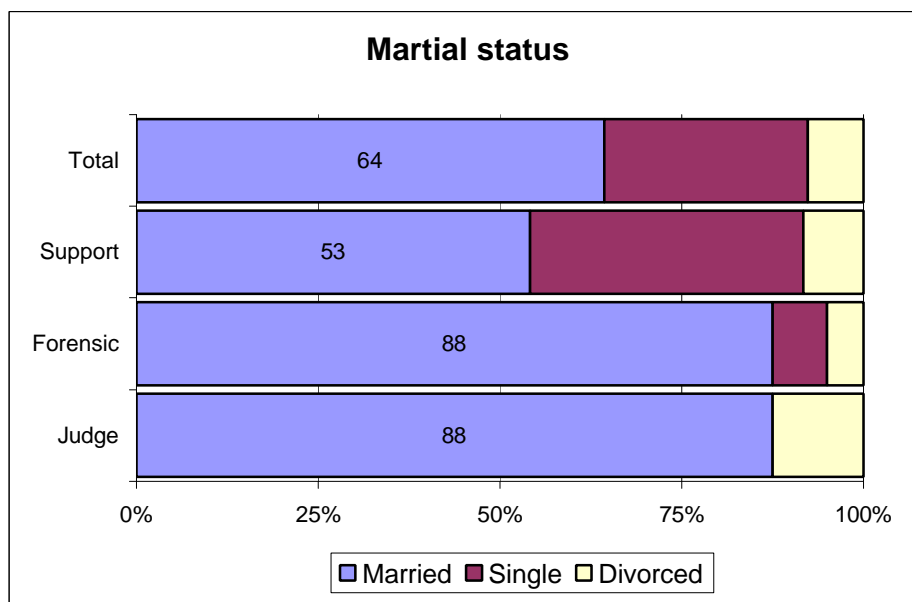
Personnel in the family courts are predominantly female. Six out of eight judges in Guatemala City are women, relatively few forensic doctors are women, but 45% of support personnel are women.

Graph 1. Sex by job position. Personnel of the Justice System, Guatemala. May, 2001



The mean age was 37 and 64% of the sample is married. Judges and forensic doctors are older, and predominantly married. Support personnel are younger and predominantly single.

Graph 2. Marital status by job position. Personnel of the Justice System, Guatemala. May, 2001



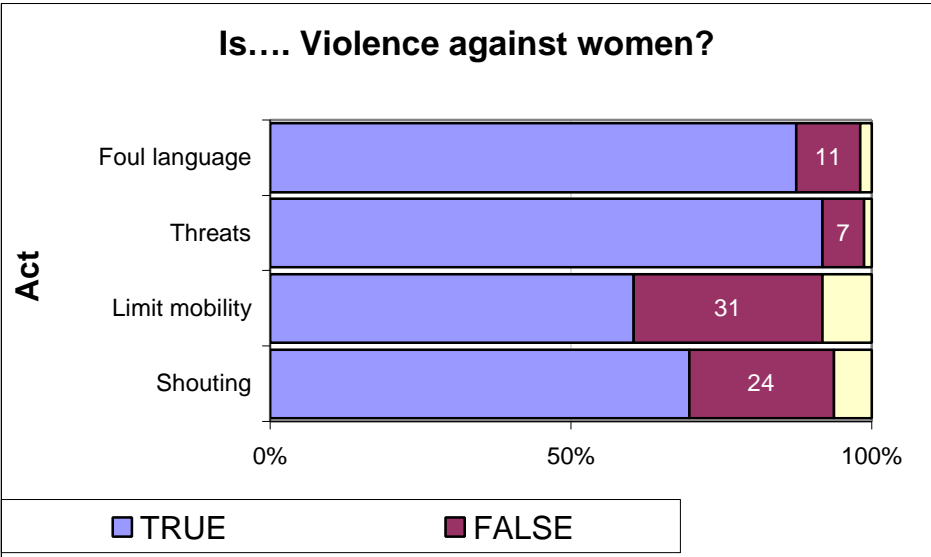
Definition of violence

The following graph shows the percent of respondents who responded positively to the question: Would you consider violence against woman...?

- Shouting
- Constraining mobility (Not allowing her to go outside of the household)
- Threats
- Using foul language.

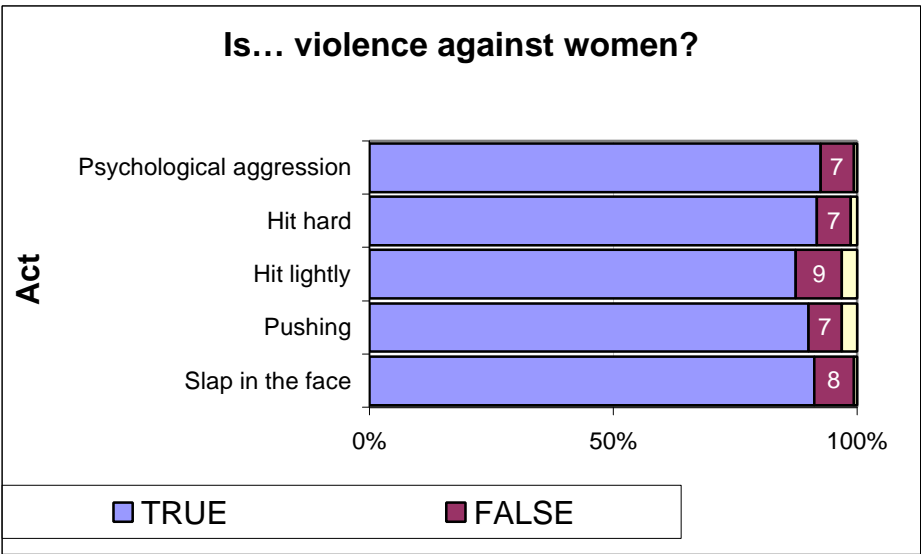
Results show that most respondents agree that any of these behaviors may be considered violence against women. However, 24% of the total sample do not consider screaming a violent behavior, 31% do not consider holding women at the household as an act of violence, and 7 to 10% do not think that necessarily threats or foul language as acts of violence.

Graph 4. Aggressions that may be considered intra-family violence (continued). Personnel of the Justice System, Guatemala. May, 2001



Results show that this same 7 to 10% consider that a slap on the face, pushing, hitting lightly or hard, or psychological abuse do not necessarily represent acts of violence against women.

Graph 4. Aggressions that may be considered intra-family violence. Personnel of the Justice System, Guatemala. May, 2001

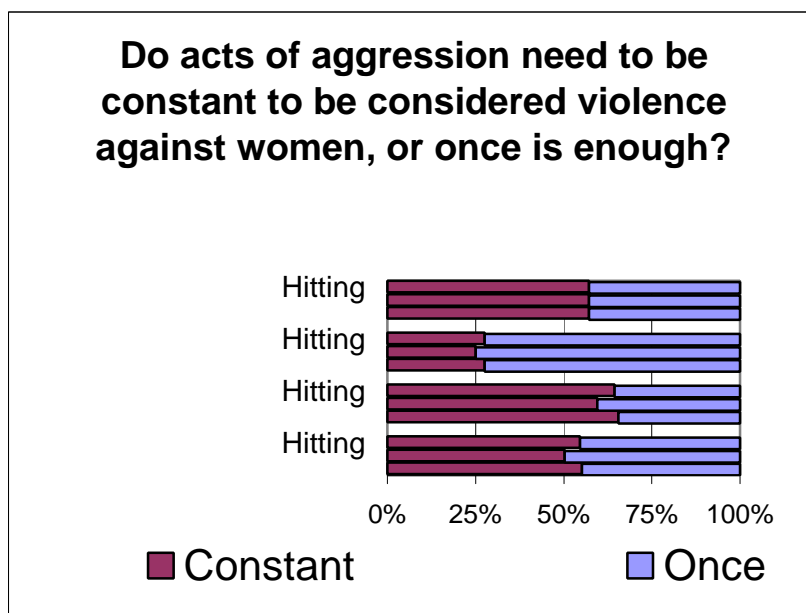


Frequency of violence

The following question that we asked was: Does an aggression have to occur once or it has to be repeated to be considered a case of violence?

Results show that, in general, one half of the sample considers a first-time aggression as an act of violence. An aggression may be hitting, threats or insults against the woman. Amongst forensic doctors, 75% consider any first episode of aggression as violence. However, 60% of support personnel consider that only repeated aggressions may represent cases of intra-family violence. This is important because, according to the law, the justice system should investigate and process every denounced case, regardless of frequency.

Graph 5. Do aggressive acts need to be constant to be considered violence against women, or once is enough? Personnel of the Justice System, Guatemala. May, 2001



Believes

Concerning believes about violence, we aimed to differentiate two aspects of the culture of violence: (1) permissiveness or tolerance for violent acts and (2) fatalism or inability to do something about it. To measure the degree to which respondents tolerate or think as natural, violent acts, we asked if he or she agreed with statements like the following:

- Men are naturally violent,
- In general, women who are or have been beaten induce in some way the incident,
- In general, women who say that they are victims of violence, are crazy,
- In general, raped women happen to induce the for this to happen.

Survey results show that 10% think that raped women in one way or another are responsible for the event, 27% think that men are naturally violent, and 20% think that women who denounce acts of violence have some kind of psychological disorder.

Comment	% True	% False	% Don't Know
It is a private problem between two adults	9	90	1
Violent men have mental disorders	29	49	19
Psychological abuse is more harmful than physical abuse	56	29	15
Women who are raped are usually responsible for what happens	6	83	11
Intra-family violence has always happened and cannot be changed	20	73	7
Most women who say they have been victims of violence have a psychiatric disorder	1	82	17
Women who are or have been hurt have done something to provoke the abuse	3	85	12

85% of people interviewed refer attending less than 5 cases of intra-family violence a month. Half of the people interviewed say that more than 75% of intra-family violence cases are denounced in the judicial branch. 13% of those interviewed believe that half of the cases are not real violence cases.

Index of Tolerance for Violence

The survey included some items to assess the fatalism with which personnel assume acts of violence. For example, we asked if the respondent agreed that domestic violence is a private problem among two adults and does not need to be made public; or violence against women has always occurred and it may not be changed. 9% per cent agreed that domestic violence is not to be made public, and 20% per cent agreed that violence may not be changed.

Based on 12 items, we developed an index of violence tolerance. The index aims to capture three dimensions of tolerance of violence: (a) awareness of aggressive acts against women, (b) frequency and (c) believes. The index aims to capture to what extent the respondent is aware of aggressions against women, is sensitive towards them and thinks that violence may be reduced. The index has a minimum value of zero and maximum of 100 points.

Results show that support personnel including operators, auxiliaries, secretaries are more tolerant of violence than judges and forensic doctors. The study did not aim to enquire the causes of such attitudes, but rather attempted only to describe how the operators of the justice system think about these problems. These results are shown in this graph, where the green dot represents the support personnel, judges' opinion is represented in red and forensic doctors in blue. You can see in this graph that support personnel score higher in the scale of tolerance of violence, than the rest of personnel.

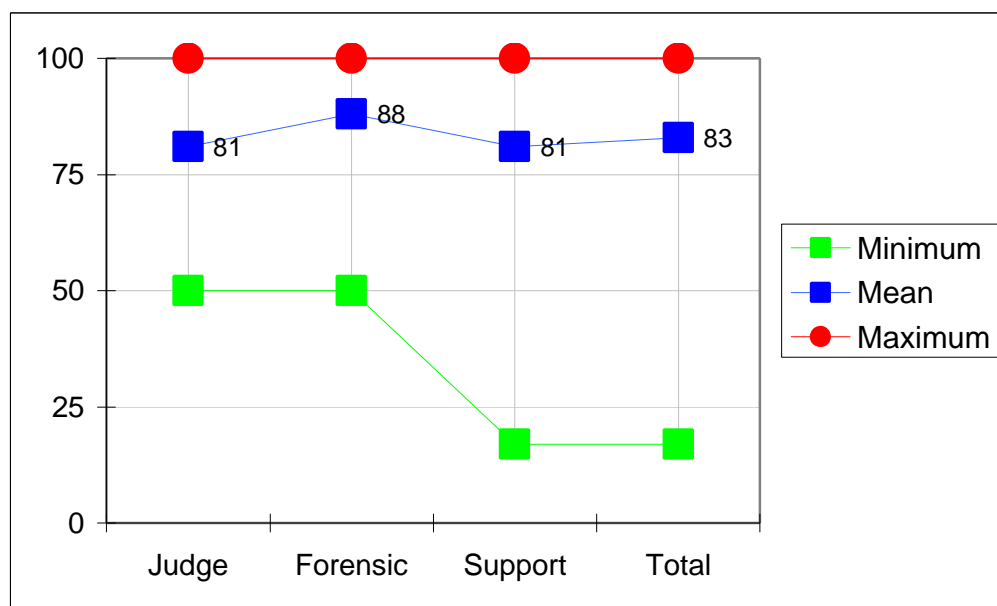
Gender equity

The following step was to measure three components or dimensions of opinions about gender equality: (a) agreement with the expectation of equal opportunities for boys and girls, (b) equal share of household responsibilities and (c) individuality within the couple; this is to say, the capacity for women to make independent decisions within the household.

To measure expectations concerning educational opportunities, we asked: Up to what level should BOYS study? The same question was asked about girls. Similar questions were asked about work and economic independence. The question was: which of the following you think is most important, important or not important for BOYS?, and similar questions were asked about girls.

Results show that in all three groups analyzed, some respondents reach the maximum level in the scale. The mean response was 80-83 point in the 100 point scale. Surprisingly, some support personnel scored low in the scale, below 25 points. This result was surprising because, as we say earlier, this group is predominantly female.

Graph 6. Opinions about gender equality. Personnel working for the Justice System. Guatemala, May 2001.



Tolerance for Violence and Gender Equity

To test the hypothesis that tolerance of violence is related to gender perspective, we studied the correlation between the gender perspective index and the tolerance of violence index. To facilitate the presentation of results, we recoded both indexes into dichotomic variables.

Results show that respondents who are favorable to gender equality, tend to be less tolerant of violence against women. Conversely, respondents who are not particularly favorable to gender equality, tend to be more tolerant of violent acts against women.

Results show a highly significant relationship between both attitudinal factors. The adjusted Chi-square statistic was 73.7 points, which proved to be highly significant, even considering a limited sample size.

Table 3. Tolerance for violence and opinions about gender equality. Personnel of the Justice System. Guatemala. May, 2001.

Gender equality opinion	No tolerance for violence		Tolerance for violence		Total	
	Cases	%	Cases	%	Cases	%
For	57	85.1	10	14.9	67	100
Against	14	15.2	78	84.8	92	100
Total	71	44.7	88	55.3	159	100

$\chi^2(c) = 73.7; p < 0.000$

This result is intuitively clear, and lend support to the quality of the data generated and used in this study. However, a more surprising result is that women tend to be more tolerant of violence than men.

This result may be seen in this table, which shows that 63.2% of women may be classified as tolerant of violence, as compared to 51% of men classified under the same scale. The difference is statistically different from zero, with a probability lower than 0.18. This result is confirmed with further analysis of the same variable on a continuous scale which shows in a one-way analysis of variance, a significant difference, with probability lower than 0.007.

Table 3. Tolerance for violence by sex. Personnel of the Justice System. Guatemala. May, 2001.

Sex	No Tolerance for Violence		Tolerance for Violence		Total	
	Cases	%	Cases	%	Cases	%
Female	21	36.8	36	63.2	57	100
Male	50	49.0	52	51.0	102	100
Total	71	44.7	88	55.3	159	100

VIII. DISCUSSION

This opinion surveys show that, while professional staff of the judiciary system (judges and forensic doctors) are aware and sensitive to violence issues, support staff (such as receptionists, secretaries, auxiliaries) are more tolerant or permissive of violence against women. Evidence will be presented that supports the hypothesis that tolerance of violence is closely associated with negative attitudes towards gender equality; this is to say, people who accept a lower human condition for women, are more likely to be more tolerant of intra-family violence. Surprisingly, a significant number of women are unsympathetic to women's equality and relatively tolerant of intra-family violence. This results is important because it shows that, training and sensitization of support personnel about violence issues may not be sufficient to

have an impact at the service level. This is to say, that without a serious training on gender issues, training on treatment of cases of violence may not be as effective.

Although the intervention period extended for only six months, it is expected that information about the opinions and attitudes towards intra-family violence and emergency contraception, will improve treatment of women in the different institutions of the legal system, making necessary legal procedures shorter by cutting out the repetition of activities in the different offices, and offering reproductive health services to women who need them, primarily emergency contraception.

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Appendix. Informed Consent

Informed consent to participate in the interview.

Hello. My name is _____. We are conducting a study to learn people's knowledge and opinions about women who are victims of rape and violence and the attention they receive in the judicial system. I would like to ask you a few questions about your experience and opinions. Your participation is completely voluntary.

The interview takes about fifteen minutes. If you choose to participate, the information will be kept completely confidential. You may choose to stop the interview at any time or you may choose not to respond to any question you do not wish to answer.

Do you have any questions?

Would you like to participate in the study?

1. Yes
2. No

REPORT 5.

**THE POPULATION COUNCIL
USAID-PC COOPERATIVE AGREEMENT
OPERATIONS RESEARCH**

TITLE:	Testing Strategies to Increase Promotional Activities by Promoters. APROFAM, Guatemala
STATUS:	Sub-award APROFAM I99.72A
PRINCIPAL INVESTIGATOR:	Werner Figueroa
MAYAN RESEARCH FELLOW:	María Dolores Yax
PC STAFF RESPONSIBLE:	Carlos Brambila

**REPORT COMPLETED
August 16, 2001**

**Testing Strategies to Increase Promotional Activities by Promoters
APROFAM, Guatemala
Final Report**

SUMMARY

The general objective was to design and test strategies to increase the demand of services offered by the APROFAM's Rural Development Program through promotional activities, specifically home visits, to be made by health promoters.

The first strategy, known as the male strategy, intended the involvement of males in family planning decision-making. The first home visit was to be made at a time when men were usually out of the household and only women were present. The promoter would speak to the woman about a variety of services he or she offered, including family planning, motivating her to discuss these services with her husband. The promoter would give her an information pamphlet for her to discuss with her partner and set a date for the next visit. If possible, the following visit would be programmed at a time when the male was present. Nevertheless, if the woman decided that she did not want to include her husband, information was given solely to her along with a pamphlet.

The second strategy, known as the health strategy, consisted of two subsequent visits to the household. During the first visit, the promoter would speak with the woman about health problems prevalent in the region, for which he or she had medication for treatment, but he or she would not mention family planning. During the second visit the promoter would speak about family planning, having won her trust during the first visit.

Study results show that home visits are an effective procedure for community field workers, and are acceptable for community members. This result is important because, in Guatemala, facing the rejection of community leaders, husbands and other family members, health promoters have been traditionally reluctant to conduct home visits. Drawing from previous experience, health promoters expected rejection from household members and community leaders. Also, communities were thought to actively object the presence of community health workers offering contraceptive services. This study provides evidence on the contrary.

The experiment does not show significant differences in promoter performance, amongst the strategies tested. If anything, the male strategy proved instrumental for the couple to take a immediate decision to purchase contraceptives during the promoter's visit. This is to say, that the presence of the promoter is instrumental for the couple to discuss the use of contraceptives and to decide promptly to start using. Often times, however, the man decides that the couple should use contraceptives, without much consideration of the woman's opinion. This problem, however, may be addressed through adequate training of health promoters, who should emphasize the participation of both members of the couple in the decision to use contraceptives, and to further promote the participation of men in family planning.

INTRODUCTION

A. Population and Reproductive Health in Guatemala

Over the past decade, the population of Guatemala has increased at around 3% per year. This growth rate is one of the highest in the Latin American region and, if sustained, will result in a population that doubles every 23 years (Population Reference Bureau, World Population Data Sheet, 1997). Although the 1994 Census undercounted significant portions of the population, various estimates have placed the current population at between 10.3 and 11.5 million (the 1997 World Population Data Sheet estimates the population at 11.2 million). This population is very young with 45% under the age of 15.

Approximately 2.3 million women in Guatemala are of reproductive age (15-44) and the Total Fertility Rate (TFR) was 5.1 according to the Population Reference Bureau, World Population Sheet 1997. This rate has shown a very slow decline from 6.1 in 1978 (APROFAM 1978). In comparison, the average TFR for Latin American as a whole was 3.0 (Population Reference Bureau, World Population Sheet 1997).

The crude death rate in Guatemala has shown a sharp decline from 20.5 in 1950 to 7 currently. This decline has raised the life expectancy from 42 to 65 years over the same time period (USAID/Guatemala, Population and Health Profile 1990, World Population Sheet, 1997). The infant mortality rate has also shown a substantial decline since the 1950s, but at an estimated level of 51 per 1,000 live births in 1997 (substantially higher in rural areas), this rate remains unacceptably high. According to the 1995 DHS, the rate has increased to 31.3% of women in union, and the unmet need for contraceptive services is 24.3%.

B. Reproductive Health: Ethnic and Regional Variation

The Guatemalan population can be divided into two main groups of approximately equal size: the western- oriented, primarily urban Spanish-speaking, and the indigenous Mayan inhabitants. The former is referred to as ladino, and the remaining Mayans are composed of numerous distinct cultural and linguistic groups who speak 25 different languages. Historically, political and economic power has been held by the upper classes of the ladino population, and consequently the Mayans have been marginalized from virtually all aspects of national life and have also suffered most from more than three decades of armed civil strife.

The inequality between *ladinos* and Mayans is clearly marked when national health statistics are broken down by ethnicity. The national infant mortality rate for the entire population has been estimated to be 51 per thousand live births, but in many Mayan communities, the rate may be twice the national average. Geographically, there also exists a strong demarcation between ladino and Mayan groups. For example, in the predominantly ladino regions of the country, the Northeast and the Southeast, the 1995 DHS found the use of contraceptives to be 25.7% and 29.1% respectively. Both of these rates are equal to or above the national average of 23.2%. In

the geographical regions with a Mayan majority,, however, the rates drop to 13.7 and 11.8 respectively. The DHS found an overall CPR of 9.6% among Mayan speakers. This rate has improved very slowly since the first contraceptive prevalence study was carried out in 1978 and found the CPR among Mayan couples to be 5%.

Education and literacy rates are similarly disadvantageous for the Mayan population, particularly among women, which makes the expansion of information about health care difficult. The 1995 ENSMI found that 39% of rural women in fertile age had no schooling, a figure which rises to 53% for all indigenous women. The seven target departments of the highlands for implementing the strategy are: Totonicapán, Sololá, San Marcos, Quetzaltenango, Huehuetenango, El Quiché, and Chimaltenango, which have predominantly Mayan populations.

C. APROFAM

APROFAM is the Guatemalan International Planned Parenthood Federation affiliate and the largest provider of family planning services in Guatemala. The Association was founded in 1964 by a group of professionals, including doctors, nurses and social workers. Its greatest strength lies in its extensive experience in family planning and reproductive health in Guatemala, primarily for urban ladino residents. The Association has been successful in expanding its scope and operations despite severe political attacks due to the conservative climate generated by the Catholic Church and some political and national leaders.

APROFAM operates 27 maternal-child health clinics located in urban centers through the country and maintains a network of over 3,500 peri-urban and rural distribution posts. The clinics provide family planning services and select maternal-child services such as prenatal care, immunizations and supportive laboratory services.

APROFAM introduced its community-based distribution program, now named the Rural Development Program, in recognition of its emphasis on reaching the rural population, in the mid-1970s after realizing that clinic-based services were insufficient for reaching all men and women interested in spacing the births of their children. The program began recruiting promoters in the outskirts of Guatemala City, and has since grown rapidly to cover the entire country. The distribution posts are run by trained community volunteers who offer information on family planning methods, referral to APROFAM services and provide oral contraceptives, barrier methods, injectables, prenatal vitamins, ORS, antihelminths and other basic medications.

The Rural Development Program has 135 paid employees, including educators, field directors, 3 general supervisors, and a program director and sub-director. The educators are the first level of supervision for the volunteers. Their responsibilities include the provision of contraceptive supplies for the volunteers located in their assigned geographical area. Educators also promote the services of APROFAM through educational talks held periodically with members of each community where a volunteer is posted. The field directors are responsible for supervising the activities of the educators and volunteers within their assigned area. Field directors perform much of the data collection activities to monitor the progress of the program. Supervisors, located in Guatemala City, monitor the quality of work of all of the field directors and educators.

PROBLEM STATEMENT

The Rural Development Program has approximately 105 educators and a network of more than 3,500 promoters. Currently, the great majority of the educational and promotional activities are conducted by educators. Promoters are generally static providers of methods and basic medications. This is a large, untapped resource for the program, particularly in view of the findings of the 1995 Council-funded diagnostic study that showed a large proportion of the promoters are interested in increasing their educational activities. Also, the 1995-1997 OR for re-engineering the Rural Development Program found a statistically significant association between home visits and number of people attending group talks by educators on the one hand with sales of contraceptives by promoters.

The reason why promoters who state that they want to be more involved in educational and promotional activities but are not is not clear. Theories to explain the discrepancy include:

- promoters have received little training in IEC techniques, and no follow-up practice with their supervisors,
- promoters have inadequate supplies of IEC materials to use in home visits (the 1995 diagnostic found that only half had even one brochure, and the promoters' manual can not be left with a potential user),
- some promoters have other work that takes up most of their time,
- no one has ever asked them to do promotion, since this has been considered the responsibility of the educator.

Since home visits are statistically associated with higher contraceptive sales, the problem is how to modify the promoters' work so that (s)he visits potential clients as a routine responsibility and what approaches to use during the home visit.

PROBLEM SOLUTION

The study tested first the feasibility of home visits by promoters - are trained promoters willing to make home visits, and are they accepted or rejected by the community. Second, two strategies were developed to determine whether one or the other results in greater demand for the services provided by APROFAM promoters. Both strategies are based on widely held assumptions, supported by research and experience, that involvement of men and a broad health approach to education about family planning are crucial to gaining acceptability among the Mayan population.¹

The first strategy was designed to involve the male partner. The promoters in this sample made one home visit in which, as expected, only the woman was present because men are usually not in the home at the time of day the promoter has available for making visits. The promoter was to speak with the woman about the full range of services (s)he offers, including family planning, encourage the woman to discuss the services with her husband, leave both the health and family planning brochures for the couple to discuss together, and make an appointment for a return visit. If possible, and if acceptable to the woman, the return visit was to be scheduled for a time when the male partner was present. If, however, the woman did not want to involve her husband, she could receive services respecting her confidentiality.

The second strategy also involved two visits. In the first the promoter discussed with the woman the health problems for which the promoter has medications, but family planning was not to be discussed unless the woman brought it up. The medications the promoters carry include multi-vitamins, Vitamin A, iron, analgesics (acetaminophen and Ibuprofen), ORS, and antihelminths. In the second visit, the promoter was to discuss family planning, having already gained the trust of the woman in the first visit.

The two strategies are here compared against each other and against the rest of the promoters nationwide who did not participate in the study to determine if sales of family planning methods and basic medicines increased using one or both strategies.

OBJECTIVES

The objective of the study was to test strategies to increase demand for services provided by APROFAM's Rural Development Program through increased promotion, specifically home visits, by promoters.

The specific objectives were to:

¹Pineda, Antonieta, et al. Salud Reproductiva en el Departamento de El Quiché: Resultados del Estudio Base para un Proyecto Piloto del Hombre Maya-Quiché. 1995; Méndez-Domínguez, Alfredo. Study of Cognition and Speech patterns. University del Valle de Guatemala, 1995; APROFAM. Resultados del Diagnóstico de Campo del Programa de Distribución Comunitaria de Anticonceptivos, 1996; Figueroa, Werner, et al. Re-engineering the Community-Based Distribution Program of APROFAM, 1997.

- develop simple informational materials for non- and low-literate populations that inform about the services provided by the promoters of the Rural Development Program;
- train two groups of promoters in two different home visit strategies described above;
- measure the outcomes of the implementation of the two strategies, comparing the two and comparing them against non-participating promoters.

OPERATIONS RESEARCH ACTIVITIES

The research began with a preparatory phase in which the two brochures for the promoter to distribute in the home visits were developed; the training curricula was designed for promoters and their supervisors; the samples of promoters were selected, and data collection instruments were developed and pre-tested.

To be included in one of the samples, a promoter had to be located in an accessible site to facilitate supervision and data collection. Preference was given to women since it may be difficult for men to visit a woman who is home alone. Preferably, selected promoters were to offer all six basic medications plus the four contraceptives discussed in the brochure: Depo Provera, pills, condoms, and vaginal tablets. This latter selection criteria turned out to be somewhat problematic given APROFAM's conversion to a consignment system of delivering methods and medications, as well as the institution's weak logistics management.

Two brochures were developed to explaining pictorially and using simple language either the six basic medications or the four contraceptive methods. Both are intended for non- and low-literate audiences. While most indigenous women are non-literate, more men can read. Even if both partners are non-literate, they may share written materials with literate family and friends when they must make a decision, such as whether to seek health or family planning services.

The *jefes de campo* and the educators, the promoters' supervisors, were trained in the home visit strategies and the research protocol the first week of February 2000. Starting the following week, two courses were held each week to train promoters from an individual department in one or the other strategy. Five of the seven departments have one sample of promoters implementing the male strategy and another sample implementing the health strategy. Totonicanpan and Solola have only one sample each, one health and the other male involvement.

The promoters were trained in the technique of making home visits. Each promoter was asked to commit to making a minimum of one home visit weekly to a new couple, in addition to any follow up visits that might be needed. Their incentive for accepting the additional work was both the new skills they acquired in the training and the potential to increase their income through increases in sales of basic medications and contraceptives. Each training course was adapted specifically to the strategy being tested.

METHODOLOGY

A. Design

The study had a quasi-experimental nonequivalent control group design.

B. Procedure

Development of informational materials

Educational materials were designed by a specialized designer, who had previous experience developing reproductive health informational and educational materials. The design team reviewed existing materials, including the existing materials used by volunteer promoters, describing contraceptive methods offered by APROFAM. Based on this extensive review, the design team designed two new information leaflets: one describing contraceptive methods, and another describing medical supplies offered at the community level by APROFAM's promoters. The brochure describing methods includes pills (LoFemenal, Neogynon), injectables (Depo-Provera) and condoms. The brochure describing medical supplies includes: vitamins, anti-parasitics, rehidratation therapy and acetaminophen.

Informational materials were pre-tested by field supervisor, program managers, field workers, social workers and client clinics. Pre-testing of materials was completed using focus group dynamics.

Selection of promoters

Participating promoters were selected amongst the pool of APROFAM's volunteers. They were selected according to their previous experience, past performance, level of training, as well as personal characteristics that would ensure their effective communication with clients.

Through a screeing procedure, 144 promoters were selected to participate in the experiment: 79% women, and 21% men.

Activities conducted

- Informative meetings with the Management of Rural Development and the presentation of the project to the Area Heads (7) and educators (24) from the seven participating departments (Chimaltenango, Sololá, Quiché, San Marcos, Totonicapán, Huehuetenango, and Quetzaltenango).
- Selection of a sample of 144 promoters from the participating departments.
- Design and validation of the material to be used in the research project (health and family planning pamphlet).

- Completion of 16 training workshops in the seven departments, to which 121 promoters, 31 educators (7 new-entry level), and 7 heads of area attended.
- Completion of 113 monitoring visits divided into two phases.
- Completion of many work meetings to discuss and correct the difficulties encountered, specifically to improve the promoter's supply, increase the support by educators and extend the project until March 2001 for its institutionalization.
- Gathering of information from the promoters' home visits.

Results

A. Results of Monitoring

Between March 28th and September 7th 2000, 144 monitoring visits took place. These visits were reported through an instrument created to provide information about: visits made by promoters, accomplishments of the visits, new users of family planning, medicines sold, product supplies, problems encountered while making visits and filling out instruments, and suggestions to improve the process.

Home-visits made by volunteer promoters

During the first phase of monitoring, 95% of promoters had made home visits. The number of home visits ranged from 0 to 55 with a mean of 9; during the second phase 75% of promoters made home visits, this representing a reduction of 20%. This reduction was due to promoter's lack of time for making home visits (50%), rain (20%), illness (20%), and lack of support by the educator (10%). The number of visits made by promoters ranged from 1 to 15 with a mean of 6.

Accomplishment of home visits made by promoters

In the development of the home visits, promoters obtained immediate results, the most noteworthy being: new family planning users, sale of medicines, and referrals to APROFAM clinics.

✓ New Users

During the first phase of monitoring, 90% of promoters reported having attracted new users. The number of new users per promoter varied from 0 to 25 with a mean of 4. During the second phase, 50% of promoters attracted users, varying from 0 to 13 with a mean of 2. The number of new users was reduced because some promoters stopped making home visits altogether.

✓ Medicine Sold

87% of promoters sold medicine in visits made during the first phase and 70% of promoters sold medicines during the second phase of monitoring. The methods most

requested were Depo-provera and Lo-femenal, and the medicine sold the most were multi-vitamins, acetaminophen, and albendazol.

✓ **Referrals Made**

36% of promoters visited during the first phase referred patients to the APROFAM clinics, during the second phase 42% made referrals. The referrals made were for operations for men and women, and a minimal amount for Norplant insertions.

Support received by promoters

Promoters received support of two natures: institutional (field officers, educators and the training department), and from the project team.

a) Educator Support

Promoters involved in the research project were trained in their respective areas by the training department with support from field officers and educators.

During the first phase, 76% of promoters reported having received support from the educator to make their first visits. 24% of promoters did not receive support because: there was a change of educators, areas with no educators during the first visits, and because the educators' program did not coincide with the promoters' schedule.

In the areas of Tonicapán and Sololá, promoters manifested that educator visits were not as frequent as they desired and as a result they did not make home visits because of a lack of medicines and methods. During the monitoring visits promoters had questions about how to fill out Form B and expressed a desire for more frequent educator visits. During the second phase of monitoring, 57% of promoters received support from the educator to make visits, 18% did not receive support because the educator did not arrive on the programmed date (they make visits on Saturdays and Sundays), and the remaining 25% are promoters who did not make home visits.

b) Project Support

In the development of promoter training workshops, participants were provided with the following materials: notebook, pencil, eraser, folder, pen, forms and pamphlets. They were later given a backpack. Monitoring visits were performed by personnel responsible for the investigation with the purpose of assisting promoters in filling out Form B and resolving problems that had arisen during home visits. The promoters who were visited expressed their satisfaction with the support provided during the monitoring visits.

Necessary supplies for promoters to make home visits

Promoters must be supplied with methods, medicine, pamphlets and B Forms at the moment of making visits.

a) Methods

During the first phase of monitoring, 100% of promoters were supplied with condoms, 97% has Neogynon, 95% had Lo-femenal, 93% had spermicidal vaginal tablets, and 80% had Depo-provera. Promoters that did not have methods in stock claimed this was due to

a lack of economic resources to purchase products up-front during the educator's visits. Another reason was a lack of educator visits.

✓ **Medicine**

The supply of medicine during the first phase of monitoring was distributed in the following way: 94% had iron, 91% albendazol, 87% acetaminophen, 86% multivitamins, 84% Vitamin A, and 76% had ORT (see table 2).

Table 2

Supply of Methods and Medicine

Methods	First Phase		Second Phase	
Lo-femenal	69/72	95%	36/41	90%
Neogynon	70/72	97%	35/41	87%
Condoms	72/72	100%	37/41	92%
Depo-provera	66/72	91%	32/41	80%
Spermicidal Vaginal Tablets	67/72	93%	38/41	95%
Medicine				
Multivitamin	62/72	86%	32/41	80%
Iron	68/72	94%	32/41	80%
Albendazol	66/72	91%	33/41	82%
Acetaminophen	63/72	87%	32/41	80%
Vitamin A	61/72	84%	34/41	85%
ORT	55/72	76%	25/41	62%

Problems encountered during monitoring

The primary problems detected are the following:

1. Lack of method and medicine supplies
2. Lack of credit to purchase methods and medicine
3. Lack of support from the educator in the development of home visits
4. Change of educators due to retirement, quitting, or firing
5. New educators did not know the strategy in the areas of Quetzaltenango, Sololá, Chimaltenango, Totonicapán, Quiché and Huehuetenango
6. Due to strong rain showers, health problems, and religious situations, some promoters did not make home visits
7. Rejection of visits made by promoters
8. 9 promoters quit the study because of a lack of time, illness, religious situations, or family business
9. Cancellation of promoters that participated in the study due to misinterpretation by educators

Proposed solutions

- July 21 and 22, 7 new educators were trained, 3 in the health strategy, and 4 in the male strategy
- Greater support by personnel responsible for the investigation for voluntary promoters that did not receive support by their educator
- Many work meetings with decision makers to resolve the problem of reduced promoter supplies

B. Results from the intervention phase

Final sample of promoters

The initial promoter sample was conformed of 139 promoters, 69 trained in the health strategy and 70 in the male strategy. 100 promoters, 46 from the health strategy and 54 in the male strategy conformed the final sample of promoters. This final sample demonstrates a 28% desertion and is represented by 33% in the health strategy and 23% in the male strategy. Reasons for desertion are: absence during training workshops (18), cancellations by APROFAM (15) and abandonment due to personal reasons (6).

Description of promoter sample

81% of promoters were female with a mean age of 40, a minimum age of 27 and a maximum of 67. 78% claimed to be married or united, and 100% claimed to be literate. 88% of posts are located in the promoter's home, 70% attend posts single-handedly and 47% manifested that they made home visits before the study. As seen in Table 3, in general terms, the samples of both strategies are homogenous in most characteristics.

Table 3
General characteristics of the promoter sample by strategy

Characteristic	<i>Health Strategy</i>	<i>Male Strategy</i>
Female	88%	74%
Mean Age	41	40
Married or united	83%	72%
Literate	100%	100%
Post located in home	95%	82%
Attends post single-handedly	30%	29%
Previous experience with home visits	51%	43%

A total of 1833 home visits were made during the period between April 1st and October 31st, 2000. Of the total visits, 989 (54%) corresponded to the health strategy and 844 (46%) corresponded to the male strategy.

Table 4
Visits made according to strategy and department

<i>Department</i>	Strategy				Table Total	
	Health		Male			
	Count	Col %	Count	Col %	Count	Col %
Chimaltenango	376	38.0%	58	6.9%	434	23.7%
Sololá			22	2.6%	22	1.2%
El Quiché	81	8.2%	40	4.7%	121	6.6%
Totonicapán	93	9.4%			93	5.1%
Quetzaltenango	218	22.0%	169	20.0%	387	21.1%
Huehuetenango	34	3.4%	275	32.6%	309	16.9%
San Marcos	187	18.9%	280	33.2%	467	25.5%
Table Total	989	100.0%	844	100.0%	1833	100.0%

First Visits

As seen in Table 5, out of the 1833 visits made 1301 (71%) correspond to first or new visits, 401 (22%) to second visits, 104 (6%) to third visits, and 27 (1%) to fourth or more visits. There are notable differences between the strategies in the proportion of first visits made: for the health strategy first visits represented 55% while for the male strategy they represented 90% of all visits. 99% of visits made in the male strategy were distributed between the first and second visits, while in the health strategy this proportion was 87%, 13% being third and fourth visits.

Table 5
Distribution of home visits according to visit number and strategy

Visit Number	Health		Male		Total	
First visit	541	55%	760	90%	1301	71%
Second visit	321	32%	80	9%	401	22%
Third visit	100	10%	4	1%	104	6%
Fourth visit or more	27	3%	--	--	27	1%
Total	989	100%	844	100%	1833	100%

Monthly average of visits

Promoters were requested to make at least one visit per week or 4 visits a month; this was accomplished at the beginning of the intervention phase, but decreased to 2.6 average of visits per month, which represents 35% less than the required minimum. The most common difficulties encountered by promoters in making home visits were: rejection of the visit by husband or family (44%), women do not have money and prefer going to another NGOs or health centers where methods are free (20%), rejection due to religious reasons (8%), and others (28%). 16 promoters opted not to make visits, reasons being: sickness in 6 cases (38%), lack of time in 6 cases (38%), rain in 2 cases (12%), and other causes in 2 cases (12%).

The monthly average per strategy varied from 3 for the health strategy to 2.2 for the male strategy. This difference is established based on second, third and fourth visits. When considering first visits only, the monthly average was 1.64 for the health strategy and 2 for the male strategy.

Follow-through of activities proposed by promoters

As described previously, promoters must follow a protocol to make home visits, which is different for each strategy, this being the reason why results are presented separately for each.

a) Health strategy

During the first visit a pamphlet on basic medicine was to be given to 100% of homes visited, but according the information system, only 94% of promoters did so in this case and 15% provided the pamphlet at the second visit. During the second visit a pamphlet of contraceptive methods was to be given to all the homes visited, but only 81% reported doing so and 40% reported having provided it during the first visit because users requested it. When providing the pamphlet about contraceptives, an explanation had to be given about each of the methods. 85% did so in the second visit and 46% did so during the first visit upon user demand. Husbands were present during 34% of the first visits, the in 31% of the second visits. As will be explained further on, the presence of the husband has a considerable direct impact on attracting new family planning users. Promoters were also supposed to refer patients to APROFAM clinics or health centers, only 2% reported doing so.

b) Male strategy

During the first visit promoters were to provide two pamphlets and set a date to talk with the husband about them. 97% of promoters reported having done so, approximately 50% provided the pamphlets during the second visit. Husbands were present during 50% of the first visits, and during 59% of the second visits. As in the health strategy, 2% made referrals to APROFAM clinics or health centers.

c) Effectiveness of the visits to attract new family planning users

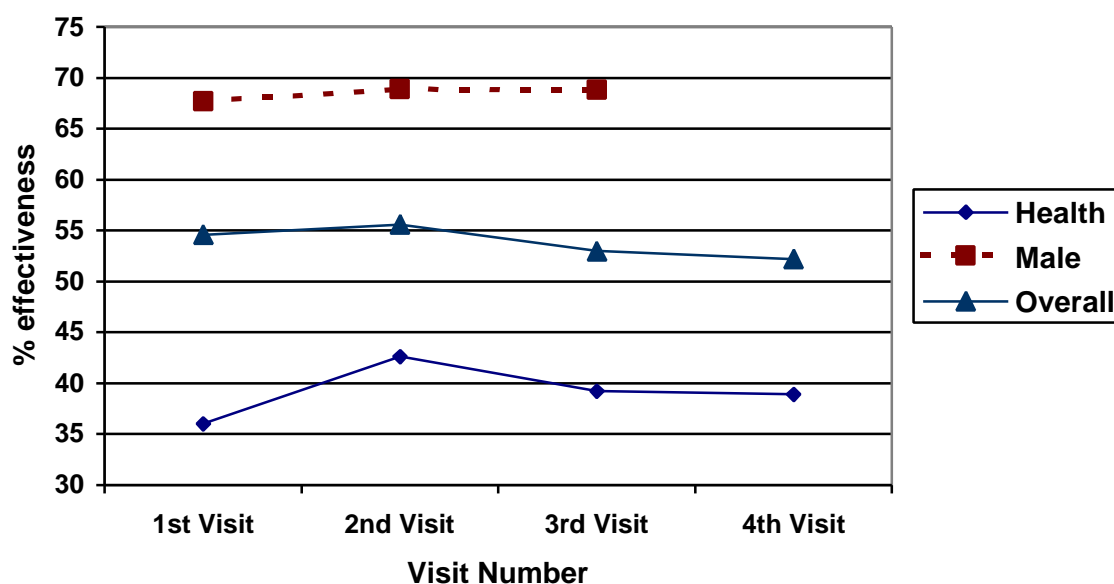
One of the expected subproducts of home visits were new family planning users. Both strategies proved to be effective to accomplish this result, but at different proportions. Of the 1833 visits, 961 new users (52%) were served, which equals one user for every two visits. As observed in Table 6, differences exist in the number of new users for each strategy, while in the health strategy there was one new user for every three visits (39%), in the male strategy there were two new users for every three visits (69%), such difference being statistically significant ($p=.000$).

Table 6
New users according to the number of visits

Visit #	<i>Health Strategy</i>			<i>Male Strategy</i>			<i>Total</i>		
	Visits Made	New Users	% accomp.	Visits Made	New Users	% accomp.	Visits Made	New Users	% accomp.
1	536	193	36%	759	514	67%	1295	707	54%
2	320	172	54%	77	62	80%	397	234	59%
3	100	10	10%	3	2	67%	103	12	11%
4 +	27	8	30%	--	--	--	27	8	30%
Total	983	383	39%	839	578	69%	1822	961	52%

In a indirect way there was interest in measuring the effectiveness of the visits, not only in general terms, but also to find the optimum number of visits to attract new users. In this sense, both strategies proved that two visits are the optimum number to attract new users, and from there on the percentage of effectiveness systematically decreases as seen in Chart 1.

Chart 1
Effectiveness of home visits to attract new users



✓ **Sale of basic medicine**

Other sub-products expected from home visits were the sale of basic medicines distributed by the voluntary promoters as well at attracting new users. In this case, both strategies were effective in similar proportions. Of the 1642 visits reported in this item,

693 (42%) resulted in the sale of medicines. Results for each strategy were comparable, yielding 40% for the health strategy and 45% for the male strategy. The greatest percentage of sales took place during the first visit for both strategies: 51% for the health strategy and 46% for the male strategy. During the second visit percentages decreased to 26% and 39% and in the third visit to 19% and 0% respectively.

✓ **Comparison of CYP's and the sale of contraceptives per promoter according to group and phase of the project**

Simultaneously as promoters sent their home visit reports, control of contraceptive sales was kept through the reports that educators sent the Rural Development Management on a monthly basis. These sales were compared to the period preceding the intervention. Once the intervention finalized, sales were compared to a control group conformed of promoters of the same areas who did not participate in the operations research. The pre-intervention period (April to October 1999) was compared to the post-intervention period (April to October 2000) for each of the three groups: health strategy, male strategy and control group. Unfortunately, the monthly educator report did not provide the location where each post was located, nor the sociodemographic characteristics of promoters, thus making the control group non-equivalent.

As seen in Table 7, the group of promoters that corresponds to the health strategy had a monthly CYP of 3.1 in the pre-intervention phase, which descended to 3.0 in the post-intervention phase. For the male strategy group the average CYP per promoter in the pre-intervention phase was 4.7 and in the post-intervention phase it descended to 4.6. The control group CYP increased from 3.0 in the pre-intervention phase to 3.4 in the post-intervention phase. These differences were not statistically significant.

Table 7
Comparison of average CYP per promoter according to group and project phase

Group	<i>Pre-intervention</i>	<i>Post-intervention</i>
Health strategy	3.1	3.0
Male strategy	4.7	4.6
Control	3.0	3.4

Conclusions

Study results show that home visits are an effective procedure for community field workers, and are acceptable for community members. This result is important because, in Guatemala, facing the rejection of community leaders, husbands and other family members, health promoters have been traditionally reluctant to conduct home visits. Drawing from previous experience, health promoters expected rejection from household members and community leaders. Also, communities were thought to actively object the presence of community health workers offering contraceptive services. This study provides evidence on the contrary.

This study shows that, at the present point in time, community workers may approach households and offer medical services, including contraceptive services. Every two household visits, one user requests contraceptive services. This result, points to the high unmet need at the community level.

Household visits have also proved to help promoters to program their activities in an organized and systematic manner. Having a specific number of visit to conduct every day, and a specified route, they are motivated to complete their assigned workload, and complete the community coverage expected from them. More simply, household visits, enable community workers to organize their work better and be more effective.

Both strategies tested under this project proved effective to increase sale of medicines and contraceptives. Considering the small scale of this project, such increase in sales and distribution of supplies, does not have a significant impact in APROFAM's financial and service statistics. However, the project shows that, if all community health promoters are trained to conduct home visits, this would show an important impact on the institutional performance.

The experiment does not show significant differences amongst the strategies tested. If anything, the male strategy proved instrumental for the couple to take a immediate decision to purchase contraceptives during the promoter's visit. This is to say, that the presence of the promoter is instrumental for the couple to discuss the use of contraceptives and to decide promptly to start using. Often times, however, the man decides that the couple should use contraceptives, without much consideration of the woman's opinion. This problem, however, may be addressed through adequate training of health promoters, who should emphasize the participation of both members of the couple in the decision to use contraceptives, and to further promote the participation of men in family planning.

To summarize, this project has provided valuable experience to expand and strengthen community based activities conducted by APROFAM. Not only have APROFAM's promoters evaluated the convenience and appropriateness of conducting home visits, but also have they improved their skills to program activities at the community level. This project has provided important input for APROFAM's decision makers to reinforce their counseling practices, through male involvement and an adequate provision of comprehensive services.

Dissemination and institutionalization

At the end of this OR, APROFAM made two dissemination seminars. During the first seminar project results was disseminated and discussed among personnel from the Department of Rural Development. In this meeting it was agreed that APROFAM will implement the most effective strategy through the Rural Development Program.

The second seminar took place in Guatemala City to discuss findings and strategies with other members of the donor community and other NGOs involved in reproductive health care. The Population Council's NGO Strengthening Program shared project results and offered assistance to other partner organizations to improve home visits conducted by community based personnel.

REPORT 6.

THE POPULATION COUNCIL

IN-HOUSE OPERATIONS RESEARCH PROPOSAL

COOPERATIVE AGREEMENT No. 520-0357-A-00-4169-00

TITLE:	Sololá: Reducing Barriers to Family Planning in the Public Sector
MANAGING INSTITUTION:	The Population Council
IMPLEMENTING INSTITUTIONS:	The Population Council and the Jefatura de Area, Sololá
COUNTRY:	Guatemala
PROJECT DIRECTORS:	Marianne C. Burkhart, Population Council (1999-2000) Carlos Brambila, Population Council (2000-2001)
PRINCIPAL INVESTIGATOR:	Dr. Felipe Lopez Dr. Francisco Mendez
START DATE:	December 1, 1999
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DURATION:	18 months
REPORT DATE:	February 7, 2002

Sololá: Reducing Barriers to Family Planning in the Public Sector Operations Research Project Report

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Sololá: Reducing Barriers to Family Planning in the Public Sector Operations Research Project Report

Summary

The purpose of this study was to design and test a strategy to reduce medical barriers to provide family planning services at MSPAS health centers and posts. The project is relevant considering widespread medical barriers that have been identified by previous studies, that constraint access of women to basic family planning services.

The intervention included: (1) the development and test of a job instrument that enables the service provider to identify if the client wants to get pregnant within the next year, if she would like to use contraceptives and, in such case, provide the necessary supplies; (2) a training program to enable service providers to use the job instrument and related materials on a daily basis and; (3) support materials such as promotion leaflets and flipcharts. The research attempted to determine whether such intervention reduces medical barriers to family planning service provision and improves satisfaction of women's reproductive needs.

The intervention was tested in five districts in the health area of Sololá, and evaluation was conducted through baseline exit interviews, a post-intervention survey and an eight-month follow-up.

Surveys showed a significant improvement of provider practices. Study results showed a four-fold increase in the practice of asking about clients' reproductive intentions. While only 8% of service providers asked about reproductive intentions prior to the intervention, this proportion increased to 26% after the intervention. Exploring reproductive intentions and promoting methods helped providers reduce missed opportunities of providing birth control to women who wish to space pregnancies, and who originally came to the health center or post for reasons other than family planning.

The proportion of clients receiving information about contraceptives increased from 9% at the baseline, to 31% after the intervention and 34% during the follow-up survey. Promotion of family planning methods increased from 5% before intervention to 9% post-intervention and 14% after eight months.

The strategy proved important to promote family planning services, and to identify if the woman requires and expects a contraceptive method. This instrument helps the woman to make the decision to use contraceptives and the provider to effectively provide one.

The simple to use job instrument developed under this project may be extended to other MOH health centers and posts, and even to other public and private institutions. The instrument has a demonstrable effectiveness to help providers offer family planning services, and to deliver contraceptive methods, should the client want to space childbearing.

I. Introduction

A. Population and Reproductive Health in Guatemala

The Guatemalan population can be divided into two main groups of approximately equal size: the western-oriented, primarily urban Spanish-speaking, and the indigenous Mayan inhabitants. The former group is referred to as *ladino*, and the remaining Mayans are composed of numerous distinct cultural and linguistic groups who speak 22 different languages. Historically, political and economic power has been held by the upper classes of the ladino population, and consequently the Mayans have been marginalized from virtually all aspects of national life and have also suffered most from more than three decades of armed civil strife.

The inequality between *Ladinos* and Mayans is clearly marked when national health statistics are broken down by ethnicity. The national infant mortality rate for the entire population has been estimated to be 51 per thousand live births, but in many Mayan communities, the rate may be twice the national average. The 1998-9 DHS found a Contraceptive Prevalence Rate of 12.9% among Mayans, compared to 49.9% among Ladinos. This rate has improved slowly since the first contraceptive prevalence study was carried out in 1978 and found the CPR among Mayan couples to be 5%.

Education and literacy rates are similarly disadvantageous for the Mayan population, particularly among women, which makes the expansion of information about health care difficult. The 1995 ENSMI found that 39% of rural women in fertile age had no schooling, a figure that rises to 53% for all indigenous women.

B. Sololá

Sololá is one of six departments/health areas that make up the southwest region. More than 90% of the population is Mayan. In Sololá 44% of the women of reproductive age have never attended school. In the Guatemalan highlands, only one department has a lower use of contraceptives than Sololá. The 1995 ENSMI, the last year fertility indices are available by department, estimated use of any method in Sololá at 9.6% and use of modern methods at 6.0% for all women of reproductive age married or in union, compared to 31.4% and 26.9% for all Guatemala.

The MSPAS infrastructure in the Sololá health area is divided into 10 districts with 10 health centers, 33 health posts and one national hospital in the departmental capital. The public hospital was the source of supply for 18.2% of users of family planning; health centers were the source for 3.0% of all users and health posts for 0.0% in Sololá in 1995 (as a point of comparison, these figures were 25.3, 6.0 and 3.6 for San Marcos, another department of the highlands). The Council noted in a November 1998 study conducted in 15 health centers in five highlands health areas that Sololá was the only one of the five where not a single patient visit was for family planning, although when clients were asked if they would like to receive a method during their visit, 47% responded positively.

II. Problem statement

Health centers and posts in Sololá are underutilized for family planning. The same reasons apply in Sololá as in the rest of Guatemala: poor provider-client interpersonal relations; medical barriers; poor technical quality of services; widespread misconceptions among providers and community members about the safety/risks of contraceptives; providers who do not speak the Mayan language of clients; and others. In short, barriers to increasing use of public sector facilities for family planning services exist at both the facility and community level.

Barriers at the facility level are especially strong in Sololá. During the Council's 1998 study of 15 health centers in five highlands departments, 47% of women visiting the three Sololá health centers observed reported they would like to receive a family planning method during their current visit. Of these, only one received a method. Certain prevalent practices were observed that prevented the woman from receiving a method; among them are the provider's practice of telling a woman to consult with her husband and return if he gives permission for her to receive a method, an unwillingness to provide a method when the woman is not in her menses, and others.

Medical barriers have been classified in five categories: eligibility criteria, unjustified contraindications, unnecessary procedural obstacles, provider restrictions, and legal and regulatory barriers.¹ Other obstacles include physical, cost and psychosocial barriers. In a previous TA project, the Council focused on improving provider technical knowledge. At the beginning of this study, the Council will be providing training and TA to the health centers to re-organize their service delivery model to decrease waiting time, improve quality, and make the center environment friendlier for clients.

¹Shelton J, M Angle and R Jacobstein. *Barreras médicas que se oponen al acceso a la planificación familiar.*

In previous research and training, the Council staff noted prevalent practices that limit a woman's access to family planning services even when she wants to obtain a method. Among them were the following:

- When a woman selects a method, the provider tells her to consult with her husband, and if he gives her permission to practice family planning the provider will then give her the method.
- If a woman is not menstruating, providers do not give her a method, but rather advise her to return during her menstruation.
- Providers talk around the subject because they are not convinced that women in their communities are interested in family planning. The result is to confuse the woman.
- Health care providers believe that providing a family planning method will take a long time, so they tell women interested in receiving a method to return in the afternoon when there are few patients. Women from outside the municipality, however, cannot return in the afternoon because their last transport option departs late morning or mid-day.

In many places, the providers are not offering Depo-Provera to new patients. The order forms are confusing and based on current usage, so they only know how to order for their existing clients.

III. Problem solution

This study proposed to design and test strategies for reducing medical barriers to family planning by designing job aids and providing training to 1) modify specific practices that prevent providers from delivering methods at the time of the consultation, 2) develop positive provider attitudes towards immediate delivery of contraceptives upon the woman's request, and 3) improve the information they provide about family planning to clients. The research intended to determine whether these improvements increase and improve the quality of family planning services provided in Sololá.

IV. Objectives

The general objective of this study was to design and test strategies to remove medical barriers to family planning services delivery in the public sector, specifically those that prevent the provider from delivering the method at the time of the family planning consultation.

The specific objectives were to:

- Develop job aids and training to correct specific provider practices that limit access to family planning services.

- Train providers in a sample of Sololá health centers in improved practices using the job aids.
- Research whether the training and job aids result in increased access and quality of family planning services.

V. Intervention

A. Intervention description

The intervention included three components, as follows:

- 1) Development, pretest and improvement of a job instrument designed to facilitate the provision of contraceptives upon the woman's request, therefore reducing medical barriers
- 2) Training program and
- 3) Additional support materials.

Development, pretest and improvement of job instruments

Rapi-entrega. This was the core instrument to discuss family planning with potential clients.

This instrument was designed to assess clients' needs, offer methods if the woman requires so, and safely deliver or hand-in the method at the moment of the visit. This job instrument is included in Annex 1, at the end of this report.

Verbal pregnancy test. This instrument was adapted from other sources to reduce missed opportunities or provide methods to clients not in menses. This specific instrument was used to reduce to the extent possible, the requirement of asking women to start method use, only when they are in menses. This checklist is included in Annex 2.

Argument checklist. This list was developed to help providers discuss fears and questions that potential users may have. The checklist included a list of questions that new users may ask about methods, and provided evidence-based responses to each possible question or fear. After instrument field test, the list was included as part of the rapi-entrega, as shown in Annex 1.

Method showcase. These materials were made by MSPAS personnel participating in the intervention. They included a brief description of each method and a statement about its use. These materials were shown at Health Centers and Posts and prompted several women to ask questions about family planning methods.

Training program.

Logistics training. This project conducted an 8-hour training program on logistics with personnel responsible of logistics at health centers and posts. The purpose of this workshop was to ensure availability of contraceptive supplies at the time of the intervention.

Instrument use training. A two-day training program on the use of project developed job instruments and materials was conducted amongst all service providers at health centers and posts. The base material to implement this training program was the Council-developed

manual: “*How to provide direct, safe, rapid and high-quality family planning services*”. At least one follow-up visit was conducted with each participating provider, following the initial training program. Project supervisors, using a previously tested observation checklist that enabled them to assess the quality of the service provided, conducted the follow-up visit. The supervision and training checklist assessed if providers asked about reproductive intentions, if they provided adequate information and if they effectively provided the methods upon women’s request.

Other support material. These additional materials included:

Legal framework of family planning services in Guatemala

Flipchart describing family planning methods

Poster describing all methods

Presentation of baseline results

Form to request family planning supplies

Guide to fill the above form

Observation guide for family planning visits.

B. Dependent variables

Dependent variables focused on changes in specific practices that limit access to services and quality of information given to clients. Specifically, the following indicators were used:

- Whether the provider gives the woman the method she wants during the visit vs. placing a barrier that requires another visit or an unnecessary test or exam
- Provider’s ability to determine likelihood of a woman being pregnant
- Provider’s ability to initiate a discussion with clients about family planning without embarrassment
- Provider’s ability to provide appropriate quality family planning counseling (this variable was disaggregated into its various components so that specific behaviors/components of quality of care can be assessed)

C. Intervention implementation

The Population Council, in coordination with the Health Area Officer (*Jefe de Area*) in Sololá, developed protocols and training to change and improve provider practices described above. The interventions focused on modifying specific practices observed by Council staff during the past several years, in contrast to updating knowledge of contraceptive technology. Providers were taught to use the job instrument in Annex 1 to determine whether the woman is likely to be pregnant so that they can give the woman the method she desires immediately.

The following section describes how the intervention and control groups were selected. The interventions were conducted among all the health posts and health centers in the intervention group, and the hospital outpatient department. No interventions were conducted initially in the health posts and centers that comprise the second (control) group.

The training was practical and non-theoretical; it focused on producing immediate behavior change among providers in their work site. For example, to overcome the difficulties providers have in initiating a discussion of family planning with a client and providing complete counseling in an efficient manner, they were trained to ask every woman who is not currently pregnant two questions: 1. How old is your youngest child? 2. Do you wish to become pregnant right away or do you want to take a rest? For all women who wish to take a rest, the provider would follow systematically specific steps: 1) explain what methods are available in the facility and for which a referral can be provided; 2) assist the woman with a series of brief explanations to determine which method she wants to use; 3) explore the myths and rumors the woman has heard and address them; 4) assure there is no medical reason the woman cannot use the method; 5) teach the woman to use the method and when to return; 6) provide the method, invite the woman to bring her husband to the facility if he has any questions, and give her a pamphlet on the method to share with her husband (if she is practicing family planning openly). Local health and APROFAM promoters were hired to participate in the training to give the providers an opportunity to practice with clients similar to those who attend the facility and reassure the facility providers that women in their communities want to practice family planning. Providers were considered as trained only after the trainer has observed the improved practices put into practice.

The intervention initially consisted of two sets of practical sessions in each of the intervention districts, one set of two trainings for health center staff and one set for the staff of the health posts connected to the health center. Each of the two trainings was two days in length. Training began each day at approximately 10:00 am, an hour at which all or nearly all patients have generally been seen.

As described in more detail in the next section, following provider training, another round of exit interviews was conducted to assess changes in practices. Following analysis of the data, the interventions were refined and training was provided again (as refresher or new) in all service sites, intervention and control. A third round of exit interviews was also conducted, eight months after intervention completion. This last step was important not only to assess the final effectiveness of the improved intervention, but also to gather adequate data to explain other health areas of the benefits of replicating the training in their areas.

VI. Methodology

A. Design

The research design was quasi-experimental with a pretest-posttest control group design. Health districts, with their health centers and posts, were purposively assigned to intervention or control groups to assure comparability of the two groups. Ten health districts were divided in two groups. The division was not random; rather the division was made to have two comparable groups. For example, there are two cities in the health area, Sololá and Panajachel. The health center and associated health posts of Sololá were assigned in one group and those in Panajachel were assigned to the other; similar pairings were made among the remaining eight districts. The outpatient clinic of the national hospital was assigned to the intervention group but was considered a unique unit of study. The list of interventions and control districts is included in Annex 3.

Two teams of 4-5 women, preferably nurses or nurse auxiliaries, each team supervised by a Council staff researcher, were selected and trained to conduct exit interviews; they visited the hospital outpatient department, all ten health centers and a sample of health posts where they interviewed women of reproductive age exiting the facility.

Following the intervention, the two teams of interviewers repeated the original exercise. The information served to refine the interventions, which then was applied to control districts followed by a third round of interviews for a final evaluation.

B. Data collection instrument and eligibility criteria

The interview questions focused on whether the provider explored the client's interest in avoiding a pregnancy in the next year, whether the woman was informed about methods available, whether the provider explored if she could safely use the method selected (if one is selected), if instructions were given about how to use the method selected, information given about possible side effects, advice given about when to return, if the client was given an opportunity to ask questions, and whether a method was actually provided.

The sample of women interviewed included all women attending health centers and posts, and the outpatient clinic at the General Hospital of Sololá. Eligibility criteria included: (a) 15 to 49 years of age, (b) sexually active (proxy: women who declare being in union), (c) does not want to get pregnant within the following 12-month period, (d) verbal agreement to respond the questionnaire (informed consent).

C. Data collection

Data collection was conducted as follows:

- 4) A baseline survey consisted of exit interviews at all Health Centers and Posts in the Health Area of Sololá, including intervention and control groups.

- 5) A post-intervention survey was conducted six months after the baseline, and after the intervention was completed. As described in the previous section, the intervention consisted in training of service providers to use the job instruments that would expectedly reduce medical barriers to offer family planning methods.
- 6) Eight months after the post-intervention survey, a follow-up survey was completed only among the intervention centers and posts, to assess the extent to which intervention effects were still present.

Baseline data collection was completed during the first semester of 1999, the post intervention survey was conducted during the first semester of 2000 and the eight-month follow-up was conducted during the first semester of 2001.

D. Field work

A team of 10 trained interviewers, including bilingual personnel, conducted fieldwork: 3 Kakchiquel speakers, 2 Tzutujil speakers, 3 Quiché speakers, 2 Spanish speakers and 2 supervisors.

Interviewers were based at the exit door of the health facility. Women were approached at the time they were ready to leave the center or post. An informed consent protocol was read to each woman and, if she agreed to respond the questionnaire, they would go to a more private setting.

Women who did not want to get pregnant in the next year were questioned in detail about the providers' behaviors during the visit that facilitated or reduced her access to a family planning method.

The number of interviews completed at some posts was relatively low due to: (a) low service demand, (b) absent personnel due to vaccination campaigns, community censuses or district meetings, (c) mobility of personnel.

VII. Results

A. Sample

The study completed a total of 2554 interviews during the project period. The baseline survey completed 1084 interviews in a three-week period, including 488 interviews at health centers, 572 in health posts and 24 at the hospital's outpatient clinic. The post-intervention survey completed 667 interviews: 355 at health centers, 283 at health posts and 29 at the outpatient clinic. Finally, the follow-up survey completed 801 interviews.

All women interviewed were between 15 and 49 years old, with a mean age of 28 years of age. All women interviewed were in unions (sexually active), non-pregnant and preferred NOT to get pregnant during the following 12-month period after the interview.

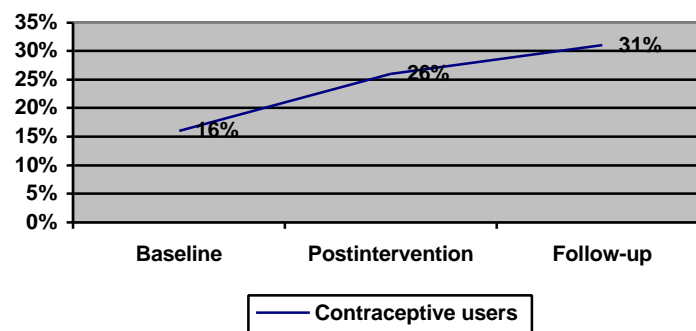
Only 0.7% of women interviewed did not have children at the moment of the interview. The average number of children was 4 children per woman, with a wide dispersion between 1 and 16 children.

There were no significant differences in provider profile across studies. More than 70 per cent of providers interviewed were Nurse Auxiliaries, and all the rest were doctors and professional nurses.

B. Contraceptive prevalence among health service users

The baseline survey showed that 16.2% (n =1083) of women attending health centers and posts used a contraceptive method at the time of the survey. Such proportion increased to 26.4% (n =666) after the intervention, and further increased to 31% (n =768) during the follow-up observation period. Differences over time are statistically significant ($p < .000$). The time trend of client contraceptive use is shown in graph 1.

Graph 1
Contraceptive prevalence among health service users



Depo-Provera® showed to be the most frequently used method. Its share in the method mix increased from 39% during the baseline to 50% after the intervention, and finally to 56% during the follow-up survey. Also natural methods, such as rhythm, supported by the *Collar* as a memory aid, are commonly accepted (increased from 17 to 21% in the follow-up). The proportion of women requesting pills reduced over the project period from 6% to 3%. Also, IUDs and condoms are rarely used both before and after the intervention. Clearly both methods are largely neglected both by providers and clients. These changes in the method mix are shown in table 1 and are statistically significant ($p < 0.000$).

Table 1
Methods used at the time of the survey

	Baseline N = 1083	Post-intervention assessment N = 666	8-month follow-up N = 768
Depo-Provera	39%	50%	56%
Natural methods	17%	21%	21%
Sterilization	16%	9%	12%
Pills	19%	8%	6%
IUDs	6%	6%	3%
Condom	3%	6%	2%

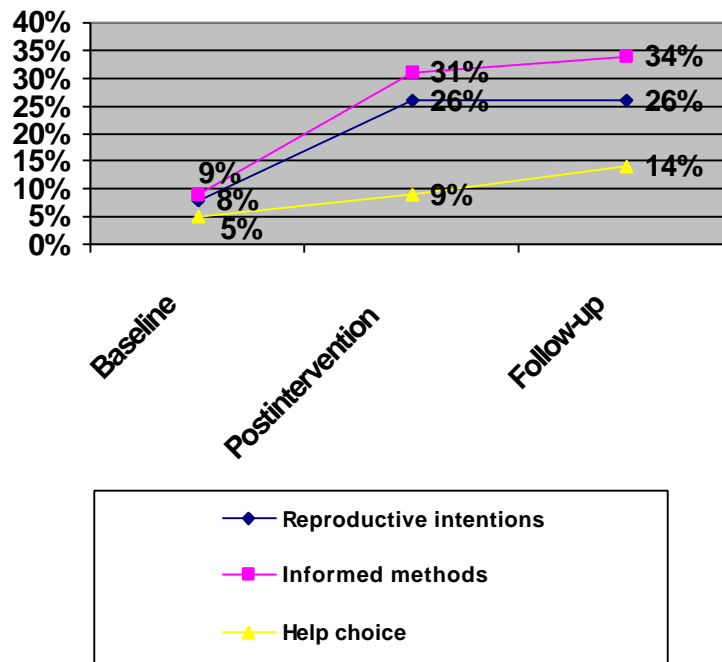
Source: Exit interviews. **Sololá: Reducing Barriers to Family Planning in the Public Sector.** Population Council: December 1999- September 2001.

C. Provider practices

Surveys showed a significant improvement of provider practices. Important changes observed include the following:

1. A four-fold increase in the practice of asking about clients' reproductive intentions. While only 8% of service providers asked about reproductive intentions prior to the intervention, this proportion increased to 26% after the intervention. Exploring reproductive intentions and promoting methods helped providers reduce missed opportunities of providing birth control to women who wish to space or limit pregnancies, and who originally came to the health center or post for reasons other than family planning.
2. The fraction of clients receiving information about contraceptives increased from 9% at the baseline, to 31% after the intervention and 34% during the follow-up survey.
3. Promotion of family planning methods increased from 5% before intervention to 9% post-intervention and 14% after eight months. This result may be observed in graph 2 below.

Graph 2
Promotion of family planning methods



Survey results show a significant increase in Depo-Provera® promotion and information, from 8% before intervention to 31 and 33% after the intervention and follow-up respectively. IUDs and natural methods are less frequently referred to during family planning visits (15% of cases, remaining constant during the project period).

Before the intervention, only 5% of providers allowed clients to ask questions about contraceptives. Such proportion increased to 17% after intervention and to 19% in the follow-up study.

D. Family planning services offered at the time of the visit

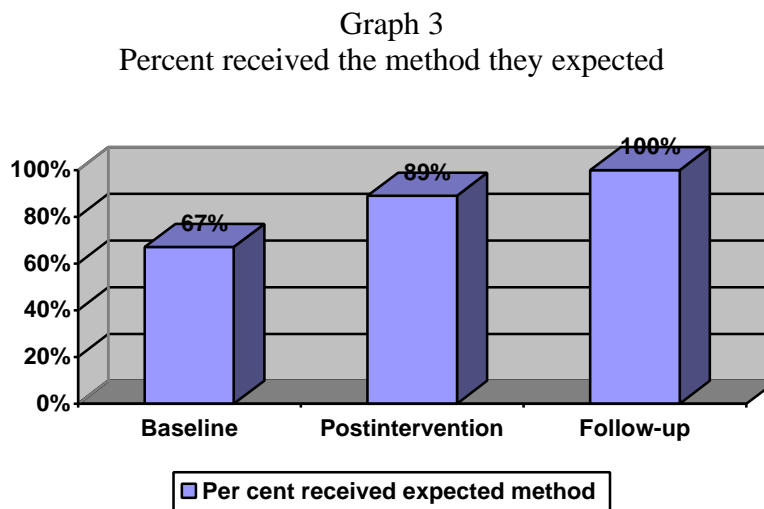
Prior to the intervention, family planning was rarely a motive to attend the health center or post. After the intervention, family planning services was the fourth most important reason for attending health facilities. Other motives include sickness of a child (52%), own sickness (32%) and vaccinations (15%).

Supply of contraceptives at the time of the visit increased eight-fold, from 0.7% to 6% after intervention, although it later reduced to 4% during the eight-month follow-up. This is a highly significant result and project achievement.

Changes were observed in the mix of methods offered at health centers and posts. According to the baseline measurement, 50% of women receiving methods prior to intervention received Depo-Provera, 33% received pills and 17% condoms. After the intervention, reportedly 61% received Depo-Provera, 21% pills, 7% condoms and 3% IUDs, natural methods, or were referred for sterilization. According to follow-up results, 80% were receiving Depo-Provera® eight months after intervention, 15 % were receiving pills and 5% natural methods.

Prior to the intervention, 67% of women who received a method reported receiving the method that they wanted. Such figure implies that 33% of women who received methods, actually received a different method from what they requested. Most often, in such cases, women requested Depo-Provera, and received pills. The main reason for this being the unavailability of supplies at the time of the visit.

After the intervention, the proportion of women receiving the expected method, increased to 89% (25 women out of 27). The eight-month follow-up survey showed that all women receiving methods actually received the method they wanted. This is also a significant project achievement, shown graphically in graph 3.



Prior to intervention, among women who wanted a contraceptive method, but were unable to receive such, only 4 per cent received an appointment or referral to receive the method. This proportion increased to 7 per cent during the post intervention period, and 11 per cent during the follow-up. Such 7-point increase in client referral is statistically significant ($p < 0.000$).

E. Medical barriers

Survey results show contradictory information concerning the partner's approval barrier imposed by some service providers. While only 3.6% of women interviewed pre-intervention declared that the provider requested partner approval to provide contraceptives, the

corresponding fraction after intervention increased to 10.2%. Such result contradicts prior results that show a positive and significant impact of the intervention.

This result is partly explained by the fact that, during the intervention period, some women accepted methods, without consent from their partners. Consequently, one incident was reported that the husband of an unauthorized user threatened the provider and made an attempted attack to the health facility.

Although the incident was only one reported case, several providers refused to provide methods without partner approval. These practices, both from husbands and partners, and service providers, require attention from health authorities, who may further stress the right of women to use contraceptives and meet their health needs.

A positive result, however, was that only 2.3% of women interviewed during the eight-month follow-up were requested to ask their husbands or partners for permission to use contraceptives. The result is positive, considering that this use to be a common barrier among providers.

Another barrier that still appeared after the intervention was the requirement of women in menses to provide a contraceptive. Unexpectedly, 4 per cent of clients interviewed reported such requirement as the reason used by personnel not to provide the method.

Table 2 below shows the time trend of medical barriers among the intervention sites during the project period.

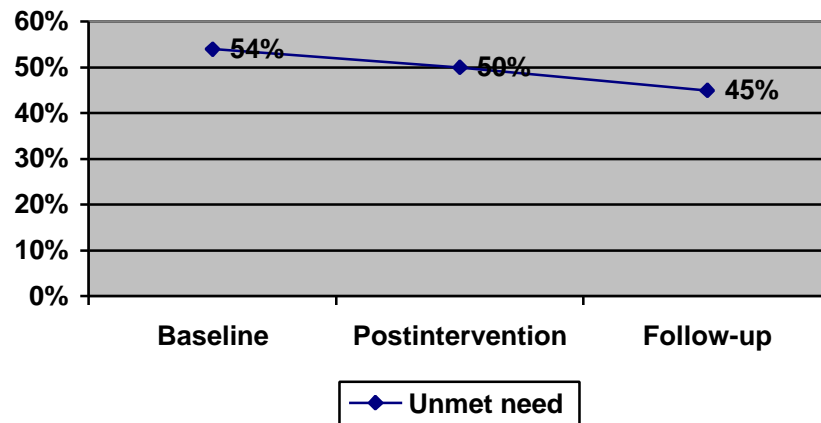
Table 2
Medical and institutional barriers to provide family planning methods.

	Baseline N = 1083	Post-intervention N = 666	Follow-up N = 768
Authorization from partner or husband	4%	8%	2%
Absence of menstrual cycle	2%	4%	4%
Stock outs	.7%	.4%	0%
Counter indications	.2%	.2%	.2%
Lab exams	.3%	.4%	.6%
Unavailability of method at unit	.1%	.4%	.4%
Personnel has not enough time to provide service	.3%	.2%	1.2%

F. Unmet need

Graph 4 shows the time trend of unmet need, before and after the intervention. This graph shows that, prior to the intervention, 53.6% of women who did not receive a contraceptive method, would have accepted a method, should the service provider have offered such. After training and use of job instruments, this proportion reduced to 49.8%, and eight months after intervention it was 45.1%.

Graph 4
Percent women who would have accepted a contraceptive method, should the provider have offered such



($p < .000$)

VIII. Conclusions and recommendations

The intervention proved effective to reduce medical barriers and make contraceptive services accessible and available to women at health centers and posts. This is proven by the statistically significant differences observed before and after the intervention among intervention and control districts, in terms of the proportion of women who would like to use a method, and who effectively received such method.

The strategy also proved important to promote family planning services at health centers and posts. Prior to the intervention, none among women interviewed reported family planning as a main cause to attend the health facility. After the intervention, and during the follow-up period, women reported attending the center to receive family planning services only.

The strategy was adequately supported and strengthened by promotion activities that attracted the attention of potential clients, and disseminated general information about family planning. Promotion activities proved to have a strategic importance to ensure a successful intervention.

The instrument allows the provider to easily identify is the woman requires and expects a contraceptive method. This instrument helped clients to make the decision to use contraceptives and the provider to effectively provide one.

The intervention proved more limited to combat existing and deeply rooted barriers, such as the requirement of having a menstrual cycle to receive a contraceptive method. Although only 4 per

cent of women reported such obstacles to receive a method, this project expected to remove completely this barrier.

As shown in this and other operations research studies, women and providers in Guatemala have a heavy preference for Depo-Provera.

The experience of this project indicates that provider-oriented intervention may be more successful if they are adequately supported by community-based and clinic-based promotion activities. Family planning services may not be improved by enhancing the performance of providers, without putting a similar effort promoting a preventive health culture amongst the population.

Another lesson learned along the process of implementation of this project was that intervention success can only be guaranteed if adequate logistic systems are available.

Based on project results, the following recommendations are in order:

1. The simple to use job instrument developed under this project may be extended to other MOH health centers and posts, and even to other public and private institutions. The instrument has a demonstrable effectiveness to help providers offer family planning services, and to deliver contraceptive methods, should the client wants to space or limit childbearing.
2. The main strength of the job instrument is to facilitate the provider asking questions about reproductive intentions, contraceptive needs, and method choice. This is important, considering that presently in Guatemala, several service providers are reluctant to provide contraceptive services or even to discuss family planning matters with clients.
3. Another strength of the job instrument is that it provides the client with the opportunity to ask questions about contraceptive methods, and involves her in decision-making. This is a valuable contribution, considering that traditionally, women are shy and reluctant to ask about these methods and discuss family planning issues with MSPAS personnel. The recommendation in this case is to use the instrument to prompt questions from the client, and train providers to facilitate the reportedly difficult experience that women undergo, when asking about contraceptives.
4. Use of the job instrument required adequate supervision and monitoring. Special emphasis should be made to provide adequate training and supervision to ensure proper use of the instrument. Furthermore, supervision of counseling practices should be incorporated within the scope of work of supervisors, to ensure that providers receive constant feedback concerning their counseling practices.
5. Considering that there is a widespread bias in favor of Depo-Provera, both from providers and clients, it is recommended to strengthen counseling practices so that an adequate balance of methods available is presented to potential users. Clients (and providers) need to know contraceptive alternatives, and a special efforts needs to be **made to minimize the** common practice providing the injectable, without proper evaluation of contraceptive choices.

6. Frequent stock-outs and unavailability of methods proved a constant threat to project success. It is recommended that special emphasis be placed in solving recurrent logistic problems within the MSPAS system.

IX. Dissemination and institutionalization

Results of the study were disseminated first in Sololá among participants in the research project and interventions were replicated among the control group. To promote institutionalization, the chief nurse and physician in each district were trained to train in turn new staff in the improved practices.

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Annex I . Rapi-entrega

Este material es para ayudarle a entregar métodos anticonceptivos modernos de forma fácil, segura y rápida con criterios de alta calidad.



GUÍA PARA LA ENTREGA DE PLANIFICACIÓN FAMILIAR

inicie la conversación diciendo:

1. ¿quiere otro hijo muy pronto, señora?

si
fructico

no

2. ¿está usando algún método o ya está operada para no tener hijos?

si
fructico

no

3. ¿quiere usar un método para esperar un tiempo antes de tener otro hijo?

**no
o
no sé**

Ir a hoja celeste...

si

Use el mostrario y entréguele los métodos para que los vea.

¿Quién quiere usar el método y cuánto tiempo desean esperar?

¿Quién lo usará?	¿Cuánto tiempo?	Métodos que le convienen:			
mujer 	Un tiempo nada más	PÍLDORA <ul style="list-style-type: none"> Son muy efectivos. Se toma una cada día. Pueden usarla sin peligro mujeres a cualquier edad con o sin hijos. 	INYECCIÓN <ul style="list-style-type: none"> Es muy eficaz. Se aplica 1 cada 3 meses. Pueden usarla sin peligro mujeres a cualquier edad con o sin hijos y quienes están dando pecho. No es recomendable si desea planificar menos de 1 año. 	"T" DE COBRE <ul style="list-style-type: none"> Es muy eficaz. Se coloca en la matriz. Dura 10 años. No es recomendable si quiere planificar menos de 1 año. 	NATURALES <ul style="list-style-type: none"> Regularmente eficaces: MELA, Collar. Debe de haber apoyo de la pareja.
	Ya no quiere más hijos	OPERACIÓN Entonces usted debe ir a Aprofam o al Hospital Nacional. Mientras espera que llegue el día de la operación le voy a dar uno zondones.			
hombre 	Un tiempo nada más	CONDONES <ul style="list-style-type: none"> Regularmente eficaces si se usan correctamente. Debe de usarse uno en cada relación sexual. 			
	Ya no quiere más hijos	OPERACIÓN Entonces usted debe ir a Aprofam o al Hospital Nacional. Mientras espera que llegue el día de la operación le voy a dar uno condones.			

¿Cuál le interesa?

Si responde **SI** a una de las preguntas **no entregue** el método. Ayúdela a seleccionar otro.

Si su respuesta es **NO**, continúe con la siguiente pregunta.

¡Muy bien! Usted ha escogido un método, ahora veremos si lo puede usar con toda seguridad.

PÍLDORA	INYECCIÓN	'T' DE COBRE	CONDONES
<ul style="list-style-type: none">• ¿Está embarazada? <p>Si existe duda, realizar prueba verbal de embarazo.</p> <p>Ir a hoja anaranjada... </p>	<ul style="list-style-type: none">• ¿Está embarazada? <p>Si existe duda, realizar prueba verbal de embarazo.</p> <p>Ir a hoja anaranjada... </p>	<ul style="list-style-type: none">• ¿Está embarazada? <p>Si existe duda, realizar prueba verbal de embarazo.</p> <p>Ir a hoja anaranjada... </p>	<ul style="list-style-type: none">• Pase a la siguiente página.
<ul style="list-style-type: none">• ¿Está dando de mamar a un bebé menor de 6 MESES? <p></p>	<ul style="list-style-type: none">• ¿Está dando de mamar a un bebé menor de 6 SEMANAS? <p></p>	<ul style="list-style-type: none">• ¿Ha tenido sangrado vaginal anormal en los últimos 3 meses? <p></p>	
<ul style="list-style-type: none">• ¿Sufrir de dolores de cabeza FUERTES y se le nubla la vista? <p></p>	<ul style="list-style-type: none">• ¿Tiene sangrados vaginales anormales? <p></p>	<ul style="list-style-type: none">• ¿Tuvo un parto hace menor de 1 mes? <p></p>	
<ul style="list-style-type: none">• ¿Tiene sangrados vaginales anormales? <p></p>	<ul style="list-style-type: none">• ¿Tiene o ha tenido? <p>- Cáncer de pecho</p> <p>- Enfermedad de hígado</p> <p></p>	<ul style="list-style-type: none">• ¿Su esposo o usted tienen más de un compañero sexual? <p></p>	
<ul style="list-style-type: none">• ¿Tiene presión alta? <p></p>			
<ul style="list-style-type: none">• ¿Toma medicina para ataques o tuberculosis? <p></p>			
<ul style="list-style-type: none">• ¿Fuma más de 20 cigarrillos al día y tiene más de 35 años? <p></p>			

(Pase a la página 4.)

Mencióneme las probables molestias del método que seleccionó.

Si no quiere usar

'A continuación le mencionaré algunas ventajas y desventajas que pueden presentarse con el método que seleccionó para que decida si lo quiere utilizar.'

PÍLDORA	INYECCIÓN	'T' DE COBRE	CONDONES
<ul style="list-style-type: none"> • Al principio puede que tenga náuseas y un poco de dolor de cabeza, dolor de pechos que se quita cuando se acostumbra a usarla. • Puede tener un pequeño aumento de peso. 	<ul style="list-style-type: none"> • Tal vez tenga cambios en el sangrado vaginal como: <ul style="list-style-type: none"> - Al principio manchados entre cada menstruación. - Después puede dejar de ver su menstruación. Esto no es malo. - O tal vez puede seguir igual que 	<ul style="list-style-type: none"> • Al principio puede tener cólicos y menstruaciones más abundantes que duran más días o manchados. 	<ul style="list-style-type: none"> • Muy rara vez algunas personas pueden presentar alergia. • Debe usarse uno en cada relación sexual.

'Ahora le explicaré como se usa.'

PÍLDORA	INYECCIÓN	'T' DE COBRE	CONDONES
<ul style="list-style-type: none"> • Se toma una pastilla hoy por la noche y así durante 28 días seguidos. • Empezar por las pastillas blancas y termina con las cafés. • Cuando termina un cartón, empieza otro al día siguiente. • Si olvida tomar una pastilla, tómela al momento de acordarse y siga tomando el resto como de costumbre. • Si olvida dos o más pastillas blancas, venga rápido con nosotros y le diremos qué hacer. 	<ul style="list-style-type: none"> • Se le aplicará en el brazo o nalga cada tres meses. • Siempre regrese si se le pasa su fecha. • Recuerde que pueden haber cambios en su menstruación. 	<ul style="list-style-type: none"> • Se colocará en la matriz por una persona capacitada. • Tiene que venir a control dentro de un mes. • Cuando quiera otro hijo o en cualquier momento que lo desee, viene para que se la retiren. 	<ul style="list-style-type: none"> • Abra el paquete con la yema de los dedos, no con los dientes. • Coloque el condón en el pene cuando está duro, antes de que el pene toque la vagina. • Use un nuevo condón para cada relación sexual. • Quite el condón antes de que el pene se aguade, teniendo cuidado de no regar el semen cerca de la vagina. • Si se rompiera el condón, lavar la vagina y el pene con agua y jabón y consulte con nosotros. • Después de usarlo, tírelo en el basurero o letrina.

Explíqueme cómo usar el método que seleccionó.

Entregue la dosis o cantidad de métodos de acuerdo a la necesidad de la

En raras ocasiones pueden presentarse condiciones que hacen necesario que la usuaria regrese inmediatamente al servicio. Explíquesele y asegúrese que fue comprendido.

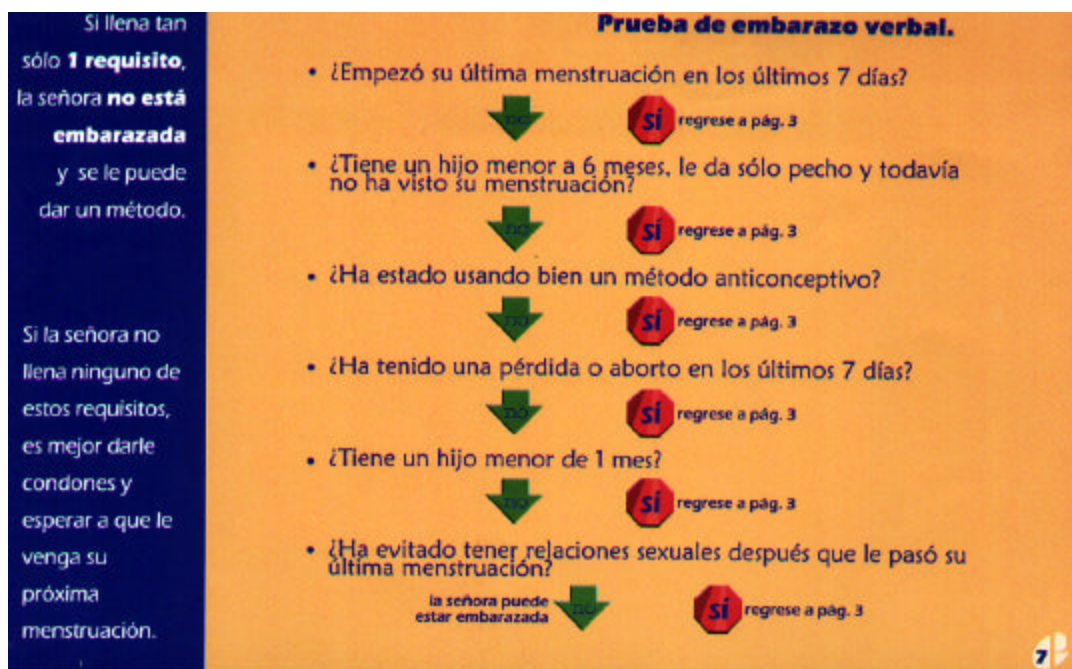
'Casi nunca hay problemas serios al usar métodos , pero usted debe regresar rápido si tiene alguna molestia como:'


PÍLDORA	INYECCIÓN	'T' DE COBRE	CONDONES
<ul style="list-style-type: none"> • Dolor muy fuerte en el vientre, pecho o piernas. • Dolor de cabeza muy fuerte después de empezar el uso de la pastilla. • Su piel u ojos se ponen amarillos. 	<ul style="list-style-type: none"> • Mucho sangrado vaginal. • Dolor de cabeza muy fuerte después de empezar el uso de la inyección. • Su piel u ojos se ponen amarillos. 	<ul style="list-style-type: none"> • Retraso de la menstruación. • Dolor en el vientre que aumenta cada vez más y además tiene sangrado y fiebre. • Cree que está embarazada o tiene una enfermedad de transmisión sexual. 	<ul style="list-style-type: none"> • Su esposo o usted sienten alergia o fuerte picazón en sus partes al usarlos. • Si se rompe el condón durante su uso.

¡En cualquier momento que usted lo desee puede regresar!

¿Tiene usted alguna duda?





<p>Pregunte el motivo por el cual no desea utilizar un método.</p> <p>Aquí le proporcionamos algunas respuestas a los rumores más frecuentes. Sólo conteste la duda de la señora.</p> <p>Si la señora decide usar un método, regrese a la página 2.</p>	Duda de la señora:	Posible respuesta:
	• ¿Es pecado?	Al contrario, evitan que mueran mujeres y niños.
	• Mi esposo no quiere.	Platiquenlo, llévele información a su esposo y regrese.
	• ¿Da cáncer?	Está comprobado que no da cáncer. En algunos casos hasta reducen el riesgo de cáncer.
	• ¿Lo enferma a uno?	No, dan algunas molestias pasajeras, pero no son graves, nada comparado al peligro de un embarazo o parto. Nadie ha muerto por usar métodos.
	• Quiero tener más hijos.	Cuando deja de usar los métodos que aquí le damos, usted puede volver a tener hijos.
	• Ya los usé y no me gustaron.	Pruebe otro método que le pueda convenir o gustar. Mientras tanto, llévese unos preservativos para su esposo.
	• ¿Se juntan las pastillas en el estómago?	Ponga una pastilla en un vaso de agua durante un minuto y enséñale a la señora cómo se va deshaciendo.
	• ¿Las inyecciones tapan la menstruación?	No se tapan la menstruación. Algunas mujeres ya no sangran porque no se produce la semilla de la mujer.
<p>El desarrollo del presente material fue financiado por la Agencia para el Desarrollo Internacional de los Estados Unidos (U.S. AID/C-CA2) bajo el Acuerdo Cooperativo 510-8157-A-00-4169-00 con el Consejo de Población.</p> 		

Annex 2. Checklist to Rule out Pregnancy in Family Planning Clients not in Menses

Questions:

Have you given birth in the last four weeks?

No Yes

Are you less than six months postpartum and exclusively breastfeeding and without menstruation since you had your last child?

No Yes

Did your last menses begin in the last seven days?

No Yes

Have you had an abortion or miscarriage in the last seven days?

No Yes

Have you abstained from sexual relations since your last menses?

No Yes

Are you using an effective contraceptive method consistently and correctly?

No Yes

If the client answers **no** to all the questions, the chance of pregnancy cannot be eliminated.

If the client answers **yes** to any of the questions and if there are no signs and symptoms of pregnancy, a family planning method can be provided.

Annex 3 . Experimental and control health districts in Sololá.

Participating health districts

Intervention	
01.	Sololá
02.	Consulta externa del hospital
03.	Guineales
04.	San Lucas Tolimán
05.	San Pedro la Laguna
06.	Nahualá
Control	
07.	Panajachel
08.	Xejuyup
09.	Santiago Atitlán
10.	San Pablo la Laguna
11.	Santa Lucía Utatlán

REPORT 7.

POPULATION COUNCIL OPERATIONS RESEARCH REPORT

TITLE:	Introductory Study of Norplant
COLLABORATING INSTITUTIONS:	APROFAM, Guatemala IGSS (Instituto Guatemalteco de Seguridad Social –Guatemalan Institute of Social Security)
COUNTRY:	Guatemala
PRINCIPAL INVESTIGATORS:	Dr. Berta Taracena. Population Council Dr. Thelma Durate. APROFAM Dr. Edwin Morales. APROFAM Dr. Gustavo Gutierrez. IGSS Dr. Carlo Bonatto. Calidad en Salud
POPULATION COUNCIL RESPONSIBLE STAFF:	Dr. Carlos Brambila.
START DATE:	October 1, 1999
END DATE:	September 30, 2001
DURATION:	24 months

**Introductory Study of Norplant
IGSS, APROFAM and Population Council
Expanding Contraceptive Choices
Operations Research Project**

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**Introductory Study of Norplant
IGSS, APROFAM and Population Council
Expanding Contraceptive Choices
Operations Research Project**

SUMMARY

The purpose of this project was to expand contraceptive choices accessible to women in Guatemala, by including high quality Norplant services in the range of contraceptive services available at two leading reproductive health service provision institutions: the Guatemalan Institute of Social Security (IGSS) and APROFAM, the local IPPF affiliate.

The components of the service provision model included: (1) service provider training (including counseling training, competency-based training and removal training), (2) IEC materials and activities, (3) procurement and distribution of supplies, (4) service delivery mechanisms, (4) monitoring and supervision and (5) inter-institutional coordination.

Under this project 35 doctors, nurses and social workers were trained to provide high quality Norplant services. At the end of this project, both institutions provide these services on a regular basis. The development of IEC materials included: informative pamphlets for potential users, and a promotional poster adapted to both Mayan and Ladino populations. USAID/G procured an adequate supply of Norplant for two years and Norplant kits. Both institutions developed data collection procedures for making projections of future commodity needs. APROFAM conducted a research project to adequately set the price for Norplant, and provide this service on a self-sustainable basis.

A steering committee was formed chaired by the Project Coordinator and consisting of representative of the IGSS, and APROFAM. The committee met regularly to plan joint activities, report on progress, discuss problems and develop strategies for resolution. In addition this study developed an instrument for supervision to be applied to clinics, which was used since September 2000, to monitor and supervise service quality.

Between January 1, 2000 and September 30, 2001, 5,161 insertions were made. The total number of extractions was 412 during the length of this project. Actual continuation rates were estimated at 92.95% at six months, 85.54% at 12 months, and 76.75% at 18 months. These rates are consistent with international standards, which have estimated a continuation rate of 84.45% at 12 months. The main reason for discontinuation was intolerance to side effects (such as headaches, abdominal pain and menstrual problems).

**Introductory Study of Norplant
IGSS, APROFAM and Population Council
Expanding Contraceptive Choices
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I. PROGRAM SETTING

A. Population and Reproductive Health in Guatemala

Guatemala is a country of over 11 million inhabitants, 62% of whom reside in rural areas. The current growth rate is 3.1% annually, one of the highest in the region. The 1995 DHS estimated contraceptive prevalence at 31.4, and use of modern methods was estimated at 26.9% of women married or in union, 15-49 years of age. Sterilization accounted for almost 60% of all modern methods, indicating the demand for long-term methods. Overall, the unmet need for permanent methods was estimated at 23.8% of all women in union of fertile age, and 7.6% for spacing. In Guatemala, there is a pattern of extended breastfeeding, and in such an environment, Norplant may help fill the role of a post-partum contraceptive safe for breastfeeding women.

Currently Norplant is unavailable in Guatemala in either the public or private sector. Both the IGSS and APROFAM, the IPPF affiliate, have expressed interest in offering this method, and the Ministry of Health has expressed support for researching its acceptability and how it would be introduced. There is a possibility that USAID will discontinue offering Norplant at some point in the future and switch to supplying the two-capsule implant instead. For this reason, a decision was made to conduct a small pre-introductory study to gain experience with implants that would be applicable with minor modifications with either a 6-capsule or 2-capsule implant.

Guatemala has a special need in relation to Norplant that is found in few other countries in the region. During the 36-year civil war, many families left the country, often landing in Mexico for extended periods, where contraceptive methods including Norplant were readily available. Many of these families have returned to Guatemala in the past three years, and women are now reaching the end of the effective period of their Norplant. They require removal, but there are very few physicians in the country who have been trained to remove the capsules.

B. The Institutions

The **Guatemalan Social Security Institute (IGSS)** is an autonomous public agency charged with services directed to the Guatemalan worker and their families based on compulsory contributions by the workers and their employers. The services provided by IGSS include education, promotion, treatment and rehabilitation and covers 17% of the Guatemalan population (25% of the economically active population).

The IGSS family planning program began in October 1993. Currently there are 32,500 users of methods that are provided in three hospitals located in the capital: the OB/GYN Hospital, the General Juan José Arévalo Bermejo Hospital, and the peripheral clinic in Zone 5. IGSS will introduce the method in the family planning clinics of these three establishments.

APROFAM is the Guatemalan International Planned Parenthood Federation affiliate and the largest provider of family planning services in Guatemala. The Association was founded in 1964 by a group of professionals, including doctors, nurses and social workers. Its greatest strength lies in its extensive experience in family planning and reproductive health in Guatemala, primarily for urban ladino residents. The Association has been successful in expanding its scope and operations despite severe political attacks due to the conservative climate generated by the Catholic Church and some political and national leaders.

APROFAM operates 28 maternal-child health clinics located in urban centers through the country and maintains a network of over 3,500 peri-urban and rural distribution posts. The clinics provide family planning services and select maternal-child services such as prenatal care, immunizations and supportive laboratory services. In 1998 a total of 73% of all family planning visits in APROFAM clinics were for Depo-Provera and the Copper-T, a further indication of demand for long-term methods.

The method was studied in two clinics: the central clinic in Guatemala City and the clinic in Quetzaltenango. The first allowed the study among ladino women, and the second allowed study among Mayan women. The central clinic in 1998 conducted 17,327 family planning visits, of which 4,755 were new visits. The clinic has seven family planning consulting rooms, 1 for pediatrics, a clinical laboratory, a cytology laboratory, and an X-Ray department.

The Quetzaltenango clinic is one of the largest outside of the capital. It is located in the highlands and the majority of its clients are Mayan. In 1998 it provided 4,568 family planning visits, 16% of these new clients.

APROFAM, the IPPF affiliate in Guatemala, is a private, nongovernmental, nonprofit, institution based in Guatemala City. APROFAM has been a pioneer in informing and making integrated health services available to families, with emphasis on sexual health, reproductive health, and family planning. Target populations include low income, rural people and Mayan groups.

APROFAM has 27 medical clinics located in urban areas and a web of community educators and voluntary health promoters who work in rural Mayan and Ladino areas. Clinic and community based facilities are coordinated by a regional manager. The Information, Education, and Training (GMIEC) department promotes services offered by APROFAM by informing, motivating, training, and educating the population on sexual and reproductive health with a focus on gender equality, which allows for the transformation of ideas and feelings to render equal decision making between men and women.

II. PROJECT OBJECTIVE

In 1999, IGSS, APROFAM and the Population Council signed an agreement to develop IEC materials and train medical and paramedical personnel to start the introduction of Norplant in Guatemala. The ultimate purpose of this project is to expand contraceptive choices accessible to women in Guatemala.

The long-term objective is to facilitate the introduction of contraceptive implants in Guatemala.

The specific objectives are:

- a. to study the acceptability, continuation, and effectiveness of Norplant for Guatemalan women,
- b. to develop a core group of providers with experience in the method so that they can serve as trainers in an expansion phase if expansion is warranted,
- c. to develop and test IEC materials and clinical protocols on a small scale that could be applied on an expanded basis if warranted, and
- d. to develop a user profile.

III. HIGH QUALITY NORPLANT SERVICES

Ensuring quality of care is important with Norplant as it is a provider-dependent method that requires a surgical procedure. Elements of high quality service delivery include the following components:

- a. Training including:
 1. Counseling training
 2. Competency-based training.
 3. Removal training.
- b. IEC Activities
- c. Procurement and distribution of Norplant
- d. Service delivery mechanisms
- e. Monitoring and supervision
- f. Inter-institutional coordination

A. Training

Counseling training. Training in counseling for all providers involved in Norplant service delivery is essential. Existing counseling manuals, such as the manual developed by the Population Council and available in Spanish, was used as a resource for training counselors. Two experienced trainers provided in-country training for counselors and nurses of both institutions (approximately 26 persons: 14 counselors and 12 nurses). The training program was one-week in length. Counselor and nurse training took place prior to the training of the physicians who inserted implants so that the counselors could initiate informational activities

within their regular counseling sessions and have patients ready for insertion when the physicians return from their training in the Dominican Republic.

In November of 1999, 3 APROFAM doctors and 3 IGSS doctors were trained in the Dominican Republic to receive training on the insertion, extraction, counseling and management of Norplant. APROFAM participants in this training program included Dr. Carlos Ruiz Villatoro and Dr. Edwin Morales from the central clinics, and Leonardo Choxón from Quetzaltenango. IGSS participants included: Dr. Miriam de Chicas (IGSS, Zona 5), Dr. Hermes Vanegas (IGSS, Gineco Obstetrician Hospital), Dr. Miguel Angel Perez (IGSS Zona 6 Hospital).

During the year 2000, approximately 35 institutional counselors and nurses were trained by two expert counselors from the Instituto Chileno de Medicina Reproductiva (ICMER).

Because of the demand of Norplant in all the major clinics, it was necessary to train 8 additional doctors from two clinics to cover an 8 hour work schedule in all the clinics. The training was provided by the Population Council staff and took place in their respective clinics.

Currently APROFAM clinics are capable of insertion and extraction of Norplant, working scheduled hours between 7:30 and 16:00 six days a week all year round. Two IGSS clinics have insertion and extraction services for 8 hours a day, and a smaller one provides Norplant services 4 hours a day, five days a week.

Competency-based training. Insertion and removal are minor surgical procedures. This project included exhaustive training on medical issues, such as contraindications for insertion, indications for removal, ancillary drug treatment for side effects such as irregular menstrual bleeding, and treatment of complications such as infection at the insertion site; technical issues concerning aseptic technique, equipment and supplies; and client satisfaction with the method and delivery systems.

Two groups of four physicians each (3 from APROFAM, 3 from IGSS, and 2 from the Council) received training, both theoretical and practical, in the Dominican Republic. These providers formed the nucleus of trainers to expand service delivery in later stages during the project. The trainer was Dr. Frank Alvarez of PROFAMILIA, who has served as trainer for the Population Council for many years. They were trained in two separate groups to allow for adequate practical experience.

Removal training. In early phases of training programs when demand for removal is usually low, training in removal was limited. Refresher training will be required in the future to assure a high level of skill in the procedure.

B. IEC Materials

Because of Guatemala's ethnic diversity, IEC materials needed to be designed for these different populations. Previous experience demonstrates that in different countries what women like best and least about the method varies considerably, as demonstrated in a study carried out in five Asian countries. When asked what women liked most about the implants, ease of use was cited by 79% of respondents in Singapore and 6.4% in Nepal. The fact that it lasts for five years was cited by 79% of women in Nepal and only 3.4% of women in Singapore. Information of this type for ladinas and Mayans in Guatemala can aid in developing IEC activities and materials.

The development of IEC materials included:

- a. informative pamphlets for potential users, and a
- b. promotional poster adapted to both Mayan and Ladino populations.
- c. Follow-up card including method use instructions and information about method.

Regarding training materials, a manual for counseling and another for the insertion and extraction of Norplant, have been developed.



Figure 1: Norplant training and IEC materials.

C. Procurement and Distribution of Norplant

USAID/GUATEMALA procured an adequate supply of Norplant for two years and Norplant kits. The first shipment included supplies for 1,000 insertions. One kit procures for ten

insertions. During this project, both institutions developed data collection procedures for making projections of future commodity needs. APROFAM conducted a research project to adequately set the price for Norplant, and offer the method on a self-sustainable basis.

At the end of this project, all participating clinics have available insertion and extraction equipment and have enough stock of implants to cover demand until May, 2002. Both institutions have expressed interest in purchasing the method with their own resources and are in the process of defining internal procedures to make these purchases a reality.

D. Service delivery mechanisms

During the project period, each of the two implementing institutions added Norplant to the range of methods they inform their potential new users about, providing information in greater detail to women who are most likely to be new users: women who want no more children or have two children already; women in their late 20's or older. Potential long-term users are also those women who are post-partum. Because the cost-effectiveness of the method is best when the method is used for an extended period of time, the institutions focused on providing services to women who expressed a desire for long-term protection.

Existing international guidelines/standards were used for screening for insertion, treatment of side effects and complications, and aseptic techniques. Procedures for contacting patients to remind them about removal were also developed. IGSS and APROFAM developed mechanisms of coordination to assure that users have access to both institutions should it be necessary. This is necessary because some users may lose their rights as affiliates to receive attention in IGSS hospitals.

Removals. Every new user was given information about removal in counseling prior to insertion and encouraged to return for it. Removal requires minor surgery, and a new set of capsules may be reinserted at the same site. Removal procedures were incorporated into the informed consent process in both institutions .(See appendix 2). Although the responsibility for returning for removal was primarily the client's, facilitated by the service provider giving the client a card or other reminder with the date of removal.

F. Monitoring and Supervision

For monitoring and evaluation purposes, it is important that relevant data be collected by service units on user characteristics, removals and reason for them, complications, and pregnancy. At a service site level, these statistics helped managers assess the demand for and quality of their programs, develop likely user profiles, and plan for removals.

The Population Council developed an instrument for supervision to be applied to clinics, which were used since September 2000, to monitor and supervise quality of Norplant services in participating clinics. (See appendix 1)

G. Inter-institutional coordination

For monitoring overall pre-introductory activities, a steering committee was formed chaired by the Project Coordinator and consisting of representative of the IGSS, and APROFAM. The committee met regularly to plan joint activities, report on progress, discuss problems and develop strategies for resolution.

A supervisory committee composed by the APROFAM coordinator, an IGSS coordinator, the Population Council, and a USAID representative was formed since the beginning of the study. This committee participated in organizational meetings periodically to comment on the progress of the study and to find solutions to problems encountered during project implementation.

IV. RESULTS

A. Methodology and instruments

Research activities included study of (a) volume of services provided (insertions, extractions on a monthly basis), (b) user profiles, (c) user satisfaction and acceptability of the method and (d) continuation rates and reasons for discontinuation. Efficacy and safety are no longer priority research issues, as they were in the eighties prior to FDA approval of the method.

To conduct these studies, three instruments were developed:

- a. Sign-up registration at the time of insertion.
- b. Follow-up form
- c. Discontinuation registration form.

Basic demographic data was collected at the time of insertion. Each client was requested informed consent to participate in the study and to voluntarily attend follow-up visits at the clinic where they had the Norplant inserted. Follow-up of participants was anonymous and controlled through an assigned study number.

Revisits were scheduled at one, six and 12 months, and annually after that. Continuation, effectiveness, and satisfaction were studied under this research only through the 12-month revisit. During each follow up visit (including treatment of side effects, one-, six- and 12-month follow-up, removals), a form was completed with information on satisfaction, side effects, continuation, and effectiveness using the study id number. The Population Council maintained a database with data from both institutions, which was analyzed regularly to assure that discontinuation and side effect rates were not excessive. Regular feedback was given to both

institutions on side effects and removals, and these data was subject of review by the oversight committee.

Analysis attempted to assess the following aspects of the Norplant introduction process:

- a. Client profile, including socio-demographic characteristics of acceptors.
- b. Client Satisfaction, including satisfaction with the method, possible side-effects, satisfaction with services received and willingness to recommend the method and the service offered.
- c. Continuity rates, including the abandon rate and reasons for discontinuation at any point after the insertion.

B. Number of insertions and continuation rates

Between January 1, 2000 and September 30, 2001, 5,161 Norplant insertions were made at IGSS and APROFAM. The total number of extractions was 412, which represents a 7.97% of the total sample of insertions during the length of this project.

Continuation rates were estimated at 92.95% at six months, 85.54% at 12 months, and 76.75% at 18 months. These rates are consistent with international standards, which have estimated a continuation rate of 84.45% at 12 months¹.

Drawing from the follow-up study, 3 cases of method failure were confirmed². These cases represent a failure rate of 0.07% among a subsample of 4413 cases followed under this study. Such failure rate is also consistent with international standards reported in the literature³.

Cumulative results from January 1, 2000 to September 30, 2001 are shown in table 1 and graph 1, as follows:

¹ Hatcher,. Outlook, NORPLANT Manual.

N. Rehan, Attiya Inayatullah, Efficacy and Continuation Rates of Norplant in Pakistan. Elsevier Science Inc. 1999

² Two additional cases were as pregnancy cases. However, in these cases it was later confirmed that women were already pregnant at the time of insertion. These cases were women who were previously using DepoProvera, who switched to Norplant during the post-injection amenorrhea period.. The reason for discontinuation among these women is “pregnant at the time of insertion”.

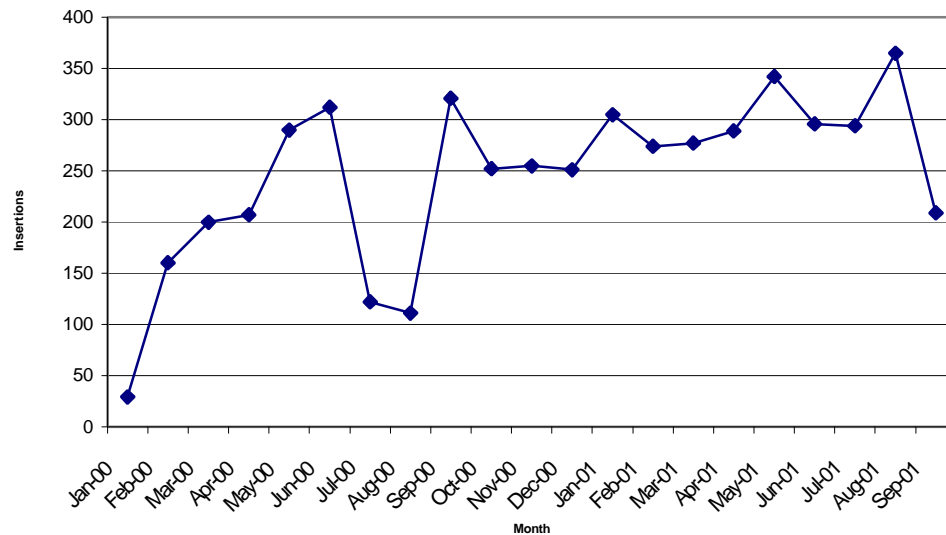
³ Failure rate: 0.24% according to Norplant Service Manual

**Table 1: Number of Norplant Insertions and Extractions all Clinics
January 2000 to September 2001**

MONTH	INSERTIONS	EXTRACTIONS	ACTIVE
Jan-00	29	0	29
Feb-00	160	0	189
Mar-00	200	2	387
Apr-00	207	1	593
May-00	290	2	881
Jun-00	312	4	1189
Jul-00	122	11	1300
Aug-00	111	17	1394
Sep-00	321	15	1700
Oct-00	252	15	1937
Nov-00	255	20	2172
Dec-00	251	20	2403
Jan-01	305	18	2690
Feb-01	274	38	2926
Mar-01	277	28	3175
Apr-01	289	22	3442
May-01	342	50	3734
Jun-01	296	31	3999
Jul-01	294	37	4256
Aug-01	365	40	4581
Sep-01	209	41	4749
TOTAL	5161	412	4749

Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM.
Guatemala, 2000-2001

Chart 1: Number of Norplant Insertions all Clinics. January 2000 to September 2001



Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM. Guatemala, 2000-2001

C. Research results

During the 21-month period between January 1, 2000 and September 30, 2001, 5161 Norplants were inserted at IGSS and APROFAM. Norplant acceptors were invited to join the study, provide demographic information and attend follow-up visits at one, six and twelve months after the insertions. Women may also could have come back if they had questions, feel any side-effect or wanted additional information. The follow-up study was conducted from January 1, 2000 to June 30, 2001⁴, and included 4,413 women. This sample includes new users until June 30, 2001, plus 126 out of the total of 294 women who accepted the method during July, 2001, less 6 missing cases.

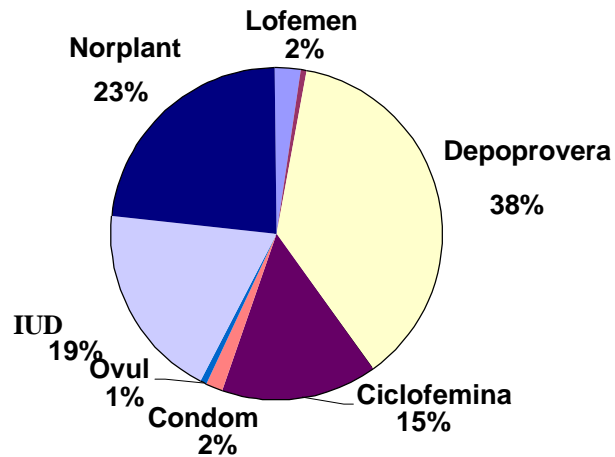
The following results are based on the universe of 4413 women who accepted the method between January 1, 2000 and June 30, 2001 (plus 126 women who received the method during July, 2001).

⁴ During the month of July, 2001, 294 Norplants were inserted in both institutions. Only 126 of these women were included in the follow-up sample.

a. Methods chosen by users

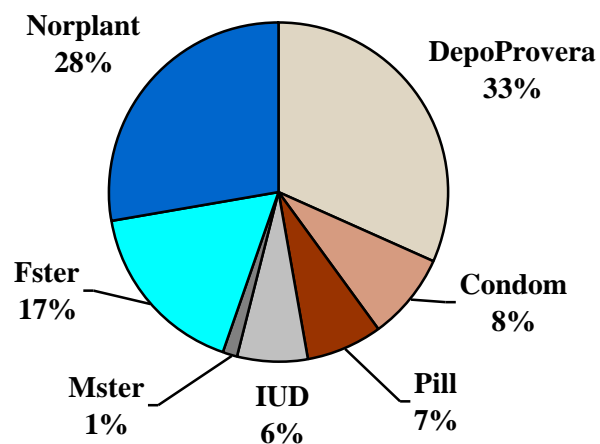
Charts 2 and 3 show that in 2001 NORPLANT was the second most preferred method among first time users and women who changed methods during the project period at both APROFAM and IGSS participating clinics.

Chart 2
Methods chosen at the Central and Quetzaltenango APROFAM Clinics, 2001.



Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM.
Guatemala, 2000-2001

Chart 3
Methods chosen at the Gineco and Zona 6 IGSS Clinics, 2001.



Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM. Guatemala, 2000-2001

b. Client profile

1. Ethnic composition

Norplant acceptors followed under this study were predominantly from the Ladino population (95.9% or 4185 out of 4413 women), although a small fraction (179 cases or 4.1%) was from Mayan origin. Mayan origin users, include predominantly Quiche (19 users) and Mam (10 users) speakers.

2. Marital status

Ninety-five per cent (95.5% or 4183 women out of 4413) of users have a stable marital relationship, including 58% (2540 cases) married and 37.5% (1643 cases) women in unions. Only 4.1% of women (183 cases) declare themselves as single.

3. Religion

Fifty-nine per cent (59.2%) of Norplant users are catholic, 28.7% belong to any of the Protestant denominations and 9.3% identify themselves with no religious denomination.

4. Literacy

Considering that the population attended both by IGSS and APROFAM is above-average in socio-economic terms, it is not surprising that 98.4% (4336 out of the 4413 users followed) of Norplant users are literate.

5. Labor force participation and occupations

Also, 50.5% (2210 users) are currently working. This rate is well above the national average female labor force participation with is 35% among women in reproductive ages⁵. Such high participation rates are clearly associated with the fact that many users are IGSS-affiliated right-holders.

About one quarter of the sample of Norplant users (26.9% or 591 women) are factory workers or employees, an additional 20.2% (442 women) are office workers, 16.5% (361 women) are clerks or office support personnel. Additional occupations include domestic workers (7.5% or 165

⁵ ENSMI, 1997.

women), professional workers (9.7% or 213 women), merchants and vendors (6.2% or 137 women). A few teachers, nurses and unskilled manual workers (all with less than 3.0% of the sample or less than 65 women) were included in the sample.

6. Pregnancy history

The average number of children amongst Norplant acceptors is 1.76 children per women (standard deviation of 0.97).

More than one quarter of the sample (26.25%) accepted the method post-partum (up to 60 days post-partum).

7. Previous contraceptive experience

A significant result is that 64.7% (2846 women) were using another contraceptive method, prior to Norplant acceptance (per cent based on 4401 valid cases; i.e. excluding 12 missing cases).

Forty-one per cent (41% or 1163 cases) were Depo-Provera users; one quarter (25.7% or 727 cases) were condom users, and 17.3% (489 cases) were pill users. Methods used by women switching to Norplant is shown in table 2.

Table 2: Methods that women were using before switching to Norplant acceptors

Method	Cases	Per cent
Depo Provera	1163	41%
Condom	727	26%
Pill	489	17%
IUD	191	7%
LAM	81	3%
Tablets	25	1%
Other natural	36	1%
Other	122	4%
Missing	12	0%
Total	2846	100%

Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM. Guatemala, 2000-2001

8. Reproductive intentions

Three quarter of Norplant acceptors (73.8% or 3252 women) would like to have more children; 23.6% (1038 women) does not want to have more children; and 117 (2.7%) are not certain or have not decided what they want⁶.

On the average, women who would like to have more children would like 1.27 children and the average expected length of time that they would like to wait before another pregnancy is 4.85 years (standard deviation 1.61 years).

9. Reasons for choosing Norplant

The most commonly cited reason for choosing Norplant is its long-term duration (56.9% of a total of 5683 responses⁷). Other reasons include its convenience (17% or 966 responses), its safeness (15.1% or 859 cases) and its effectiveness (11.1% or 631 responses).

Reasons for method selection are presented in table 3.

⁶ This figures include 6 missing cases.

⁷ The sample of 4413 women provided in total 5,683 responses because women may provide more than one reason for choosing the method.

Table 3: Reasons for choosing Norplant as a contraceptive method.

Reasons	Cases	Per cent
Long-term duration	1719	39.2%
Convenience	866	19.7%
Safe	710	16.2%
Effectiveness	630	14.4%
Easy to use	364	8.4%
Not necessary gynecological exam	63	1.4%
Other	37	0.8%
Total	4389	100.0%

Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM. Guatemala, 2000-2001

Missing = 24 cases

c. Side effects and complaints about the method

Revisits were scheduled at one, six and 12 months, and annually after that. Women were also encouraged to return should they had questions or had any side effect.

Sixty-eight per cent (68.8%) of users returned to at least one follow-up visit. This is to say that 31.2% or 1378 women did not return for follow-up visits or had less than one month post-insertion at the time the study was completed (September, 2001).

Twenty-seven per cent (27.5% or 1213 women) had one follow-up visit, 25.2% had two visits (1112 cases), and the rest had three or more visits (16 women or 0.04% had five visits).

Monitoring of side effects and possible complaints about the method showed the following results.

1. First follow-up visits

Only 23 women (0.7%), out of the 4413 that were followed reported adverse side-effects during the insertion process.

A total of 3035 women attended a first follow-up visit, most commonly after one month after the insertion. During first follow-up visits, 39.6% or 1198 women complained about pain in the arm; 1.3% or 37 cases thought they were pregnant (had the feeling or symptoms, without being actually pregnant), but 27.6% (823 cases) reported changes in their menstrual period. The type of menstrual problems reported included: amenorrhea (51.2% or 416 cases out of the 812 women who reported menstrual problems –823- and provided sufficient information to identify the type of problem encountered –812 cases with complete information); irregular bleeding (40.4% or

328 cases). More infrequently, women reported excessive bleeding (3.4% or 28 cases out of 812 women who provided complete information) and blood spots (2.0% or 16 cases).

Additional problems reported during the first follow-up visit included the following. Among the 3035 women who conducted a first follow-up visit, 1162 reported one or more additional symptoms or side effects. Considering that each woman may report more than one problem, the study obtained a total of 1372 responses or problems reported.

The most common problem reported is headaches (57.8% of the total of 1,372 responses obtained), followed by abdominal pain (17.6% or 241 responses) and nausea (10.9% or 149 responses).

During the first follow-up visit all women, except 7 (0.2% out of the total of 3,305 women who attended a first visit) continued with Norplant use. Likewise, only 10 women (0.3%) expressed dissatisfaction with the method. This means that 99.7% of women expressed satisfaction with method use. Similarly, 98% (2863 women) reported that they would amply recommend the method to other women.

During the follow-up visits, women were asked: (1) what do you like most about Norplant, and (2) what do you dislike about Norplant. During the first follow-up visit, 24.5% (1107 women) declared that the main advantage of the method is its long-term duration. Other perceived advantages of the method were: convenience (29.1% or 1317 women), safeness (16.2% or 732 cases), and easiness to use (15.0% or 676 cases).

In the negative side, 10.2% of women (297 cases) disapproved about method-related menstrual irregularities and 15.5% or (453 cases) expressed dissatisfaction with the insertion procedure. Sixty nine percent (2019 cases) did not report negative aspects of method use.

2. Second and subsequent follow-up visits

This study completed 1822 follow-up interviews of women during their second and last visits. These visits may have occurred after six-months post-insertion, or any other time, if the woman attended the clinic to ask questions, report side-effects or anticipated or delayed her second visit.

During the second or last follow-up visits, 40.9% of women (744 out of the total of 1822 second or last follow-up visits), reported having had pain in the arm; only 1.3% (23 cases) reported pregnancy symptoms and 23.3 % (414 cases) reported menstrual problems, such as amenorrhea (49.3% or 198 responses out of 402 problems reported by the 414 women who complained about menstrual irregularities), irregular (42.3% or 170 cases) or excessive bleeding (3.5% or 14 cases).

During the second or last follow-up visit, 36.9% (663 women out of a 1822 women who attended the second or last follow-up visit) reported additional complaints. In the total, these 663 women

reported 775 problems or responses. Most commonly, users reported headaches (59.1% or 458 cases out of the 775 problems or responses reported), abdominal pain (17.0% or 132 responses) and nausea (10.3% or 80 responses).

d. Continuation rates and reasons for discontinuation

During the 21-month period between January 1, 2000 and September 30, 2001, 5169 implants were inserted at IGSS and APROFAM. The total number of extractions was 412, which represents a 7.98% of the total sample of insertions during the length of this project.

The actual continuation rates are, however, calculated on the basis of the follow-up study. As described in previous sections, Norplant acceptors were invited to join the study and attend follow-up visits at one, six and twelve months after the insertions. Women may also come back if they had questions, feel any side effect or wanted additional information. The follow-up study was conducted from January 1, 2000 to June 30, 2001⁸, and included 4,413 women. This is to say, the follow-up sample included 4,413 women.

Continuation rates were estimated at 92.95% at six months, 85.54% at 12 months, and 76.75% at 18 months. These rates are consistent with international standards.

Continuation rates were variable amongst participating clinics, as shown in table 4. The IGSS hospital at Zone 5 reported a continuity rate of 1%, this is no extractions amongst the 190 users that had their insertions at that clinic. Other clinics, such as APROFAM's central clinic reported a continuation rate of 88.89% at 6 months, 80.26% at 12 months and 77.14% at 18 months.

Continuation rates among IGSS clinics, such as the *Gineco* Hospital were higher: 95.08% at 6 months and 90.2% at 12 months. Follow-up was possible only for 15 months, considering a late initiation of the project at this clinic.

⁸ During the month of July, 2001, 294 Norplants were inserted in both institutions. Only 126 of these women were included in the follow-up sample.

Table 4: Continuation rates at 6, 12 and 18 months.

Clinic	6 months	12 months	18 months
APROFAM Central Clinic	0.8889	0.8026	0.7714
APROFAM Xela Clinic	0.9508	0.8658	0.8236
IGSS Gineco Hospital	0.9698	0.9020	0.8778*
IGSS Zona 6 Hospital	0.9183	0.8399	0.7259
IGSS Zona 5 Hospital	1.0000	1.0000	1.0000*
Total	0.9295	0.8554	0.7675

*Continuity at 15 months

Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM. Guatemala, 2000-2001

As mentioned above, 311 acceptors discontinued method use during the 21 month duration of this study. Considering that each woman may argue more than one reason for discontinuation a total of 329 responses (reasons) were reported. Table 5 shows the reasons for discontinuation.

This table shows that the main reason for discontinuation was intolerance for side effects: 69.3% of responses (228 out of the total of 329 responses) are related to this factor. Other prominent reasons include: (1) the desire to get pregnant (6.7% or 22 responses), (2) separation of the couple or sexual inactivity (5.5% of 18 responses), and (3) pregnancy (4.0% or 13 responses out of the total of 329 responses⁹).

⁹ It was discussed in previously that the study estimates that 5 out of 11 pregnancies reported in this study, may have been pregnancies that occurred prior to Norplant insertion.

Table 5: Reasons for discontinuation

Reason	Responses	Per cent
Intolerance of side effects	228	69.3%
Infection	7	2.1%
Unspecified complications	11	3.3%
Pregnancy	3	0.07%
Desires another pregnancy	28	6.7%
Already pregnant at the time of insertion	2	0.61%
Separation of couple	18	5.5%
Moving to different address	1	0.3%
Partner opposition	9	2.7%
Other	20	6.1%
Total	327	100.0%

Base: 327 responses provided by 311 women who discontinued method use.

Source: Project monitoring statistics. Introductory Study of Norplant: IGSS and APROFAM. Guatemala, 2000-2001

This study attempted to determine also what side effects were related to the decision to discontinue method use. This is, the side effects more commonly cited by women that later during the study, decided to discontinue method use. The most common side effects that women referred during the follow-up visit were headaches (26.3% or 73 responses provided by discontinuers), abnormal bleeding (10.8% or 30 responses) and abdominal pain (29 responses).

Among the 311 discontinuers, 68.0% (210 cases) declared their intention to use another method. Most commonly, method switchers preferred pills (36.2% or 75 women out of the total of 210 women who expected to change methods), condoms (21.4% or 45 cases), and Depo Provera (18.4% or 38 cases). Seven per cent (7.2% or 15 women) prefer female sterilization and only 1% (2 cases) preferred male sterilization.

Among the 311 women who discontinued the method, only 46 cases (15% of this subsample) said they would not recommend the method. This represent only 1% out of the total sample of 4413 women who participated in this study.

V. PROBLEMS ENCOUNTERED

At the end of July and beginning of August there was a stock-out of Norplant implants because of a delay in shipping the products and changes in administrative policy in customs, making it delivery is services untimely. This is reflected in a decrease of implants for the months of July and August in the central clinics (see Table 1). The problem was resolved through a new method

that estimates product expenditure. USAID also stocked supplies of Norplant implants in the clinics through a method of maximums and minimums.

During the month of August, a popular television program aired an episode transmitting bad publicity for Norplant. The episode reported problems with a specific lot of Norplant implants in the United States. Many users were alarmed and insisted on extraction, which can be seen by the dramatic increase in the number of extractions during the months of August and September. Corrective action taken included the revision of all Norplant supplies to confirm that none of the implants had the same call number as the faulty lot, as well as counseling for current and potential Norplant users.

VII. DISSEMINATION AND INSTITUTIONALIZATION

At the end of the study, three workshops were held to disseminate findings. With Population Council this project will continue the introduction of implants in Guatemala through a pre-introductory study of Jadelle, the second generation of implants.

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APPENDIX I. SUPERVISION AND MONITORING GUIDE

Guía de supervisión de servicios que proporcionan Norplant

Estudio Pre- introductorio de Norplant

Clínica: _____

Mes: _____ Año: _____

Fecha de visita

1. Consejería					
Trata a la cliente amable y respetuosamente					
Pregunta sobre las intenciones reproductivas de la cliente					
- Informa sobre todos los métodos					
- Informa sobre Norplant (qué es, ventajas, desventajas, efectos secundarios)					
Pregunta sobre dudas o aclara rumores sobre el método					
- Informa sobre el proceso de la inserción					
- Llena consentimiento informado					
- Llenado de papelería (formulario de admisión y carnet)					
- Informa sobre seguimiento					
2. Proceso de colocación en clínica					
persona observada →					
- Refuerza Consejería (dudas sobre el método, rumores, explica					

técnica de inserción)					
Trata amablemente a la cliente					
- Técnica de inserción:					
Medidas de prevención de infecciones (lavado de manos, uso de guantes, desinfección del área del brazo)					
Coloca los implantes en el recipiente					
Utiliza solamente trocar para insertar los implantes (sin bisturí)					
Coloca los implantes simétricamente en forma de abanico					
Se asegura de haber insertado los 6 implantes					
- Explica instrucciones post- inserción (cuidados de herida, cambio de curita, cuando regresar)					
- Llenado de paperería (formulario de admisión y carnet)					
Explica citas de seguimiento y entrega carnet					
Técnica de extracción:					
Pregunta a la usuaria razones para retirarse los implantes					
Aclara dudas y/o rumores					
Medidas de prevención de infecciones (lavado de manos, uso de guantes, desinfección del área del brazo)					

Utiliza bisturí adecuado para la incisión (pequeña)					
Utiliza pinza en “U” para la extracción de los implantes					
Se asegura de haber retirado los 6 implantes					
Limpia y cierra la incisión sin colocar puntos					
Muestra los implantes retirados a la cliente					
Proporciona instrucciones post- retiro (cuidados de herida, dolor, en qué casos regresar)					
Recomienda y proporciona otro método anticonceptivo					
Llena papelería de discontinuación					
3. Seguimientos observada →	Codigo de persona				
Trata amablemente a la usuaria					
- Aclara dudas					
Examina área de implantes					
Pregunta por problemas					
- Trata efectos secundarios					
- Llenado de papelería (formulario de seguimiento, carnet)					
Explica fecha de próxima cita					

4. Control de citas (trabajo social) persona observada →	Codigo de				
- Se apuntan las usuarias en la hoja de control					
- Están indentificadas las usuarias faltistas					
- Se llaman/escribe a las faltantes					
5. Material y Equipo observada →	Codigo de persona				
-Equipos de inserción: Trócar en buen estado Jeringas desechables para anestesia Suficientes gasas (5-6) dentro de los recipientes Dos recipientes de acero inoxidable Pinza mosquito curva Guantes desechables Campo endido Solución Antiséptica Anestesia local	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				
-Equipos de extracción (material completo, técnica en “U”): Jeringas desechables 5 ml para anestesia Solución Antiséptica Anestesia local Suficientes gasas (5-6) dentro de los recipientes Dos recipientes de acero inoxidable Hoja de bisturí No. 15	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				

Pinza en "U"	<input type="checkbox"/>				
Pinza mosquito curva	<input type="checkbox"/>				
Guantes desechables	<input type="checkbox"/>				
Campo endido	<input type="checkbox"/>				
Material de IEC:					
Afiches en lugar visible					
Trifoliales					
Mostrarios de Norplant para la consejería					
6. Manejo de papelería	Codigo de				
persona observada →					
- Existencia de papelería del estudio (suficiente cantidad, lugar de almacenaje)					
Llena adecuadamente la papelería					
- Informes mensuales de contrapartida (entregan a tiempo)					
7. Opinion de la usuaria					
- Información brindada: - Sobre el método					
- Sobre las citas					
- Qué hacer si presenta efectos secundarios					

- Cuándo y dónde retirarselo					
- Material de apoyo (trifoliar, carnet)					
- Trato amable: De la consejera					
8. Del médico					
9. De la enfermera					
- Información sobre citas					
- Le aclararon sus dudas					

Observaciones: _____

ANNEX 2.
**COMPLETE LISTING OF OPERATIONS RESEARCH AND TECHNICAL
ASSISTANCE PROJECTS. POPULATION COUNCIL, GUATEMALA 1989-2001**

	Report Year	Funding Source*	Institution	Type of Institution	Project Title	Study Type	Study Area	Target Population
1	1989	FS*	APROFAM	IPPF affiliate	On-site Training is Most Effective in Improving Performance of CBD Promoters in Indigenous Areas	Intervention	Community promotion	Community- based distribution (CBD)
2	1989	FS	<i>Asociación Guatemalteca de Educación Sexual</i>	NGO	Interest Among Indigenous Populations in Learning about FP: the Case of AGES	Diagnostic and Technical Assistance (D&TA)	Needs assessment	Indigenous / Mayan groups
3	1992	FS	AGROSALUD	NGO	Self-Financed Incorporation of FP in Rural <i>Fincas</i> in Guatemala	Intervention	Sustainabilit y	NGOs
4	1993	FS	<i>Unidad de Planificación Familiar, Ministerio de Salud Publica y Asistencia Social</i>	MSPAS	The Use of Self- Evaluation Forms to Improve the Family Planning Program of the Ministry of Health of Guatemala	Intervention	Monitoring and supervision	Providers

1	1994	FS	Project Concern International	NGO	Increasing Knowledge and Skills of Reproductive Service Providers in Two Indigenous Communities on Lake Atitlan, Guatemala	Intervention	Knowledge	Indigenous
2	1994	FS	Population Council	PC	Strengthening Knowledge and Management Skills for MOH Family Planning National Supervisors	Intervention	Technical competence	Providers
3	1995	FC	<i>Hospital de Gineco-Obstetricia de Guatemala</i> (IGGS)	IGSS	Quality of Services for Women Seeking Abortions	D&TA	Post-obstetric event	Policy makers
4	1995	FC	APROFAM	IPPF affiliate	Baseline Study of Reproductive Health Beliefs and Attitudes of Males in Four Health Districts in the Department of El Quiché	D&TA	Men	Indigenous
5	1995	CA	Population Council	PC	Results from Diagnostic Study of Family Planning Services and Users/Non-Users in the Mayan Highlands of Quetzaltenango	D&TA	Acceptability/ accessibility	Indigenous

6	1995	CA	<i>Universidad del Valle de Guatemala</i>	Public university	Study of Cognition and Speech Patterns of Urban and Rural Indigenous Communities	D&TA	Acceptability/ accessibility	Indigenous
	1995	FC	Ministry of Health	MSPAS	Cost Analysis of Reproductive Health Services Provided by the Ministry of Health, Guatemala	D&TA	Integrated services	Service organization
8	1996	CA	<i>Asociación Toto-Integrado</i>	NGO	Testing the collaboration between two NGOs, ATI and APROFAM, in the delivery of family planning services	Intervention	NGO strengthening	NGOs
9	1996	CA	Project Concern International, Rxiin Tnamet	NGO	Testing Reproductive Health Service Delivery Strategies in Two Indigenous Communities on Lake Atitlán, Guatemala	Intervention	IEC	NGOs

10	1997	CA	APROFAM	IPPF affiliate	Designing and Testing Appropriate Health Education Strategies for Men in Four Health Districts in the Department of El Quiché	Intervention	Acceptability/ accessibility	Men
11	1997	CA	APROFAM	IPPF affiliate	Injectable Contraceptive Service Delivery Provided by Volunteer Community Promoters	Intervention	Contraceptive e choices	CBD
12	1997	FC	<i>Asociación Guatemalteca de Educación Sexual</i>	NGO	Reproductive Health Education in Indigenous Areas Through Bilingual Teachers in Guatemala	Intervention	IEC	Indigenous
13	1997	FC	IGSS	IGSS	Integrated Obstetric, Family Planning, and STD Training for TBAs	Intervention	Integration of services	Providers

14	1997	FC	Ministry of Health	MSPAS	Systematic Offering of Family Planning and Reproductive Health Services in Guatemala	Intervention	Integration of services	Providers
15	1997	CA	APROFAM	IPPF affiliate	Re-engineering the Community Based-Distribution Program of APROFAM	Intervention	Acceptability/ accessibility	Service organization
16	1998	CA	La Leche League of Guatemala	NGO	Testing the Formation of La Leche League Support Groups with Indigenous Populations in Guatemala	Intervention	NGO strengthening	NGOs
17	1998	CA	APROFAM	IPPF affiliate	<i>Mejorando las Referencias que los Promotores Voluntarios Hacen hacia las Clínicas de APROFAM</i>	Intervention	Community promotion	CBD

18	1998	FC	<i>Asociación Guatemalteca de Educación Sexual</i>	NGO	Access to Reproductive Health Services and Education in Indigenous Communities	Intervention	IEC	Indigenous
19	1998	CA	Population Council	PC	Dissemination of Lessons Learned in Delivery of Reproductive Health Services in Rural Guatemala	DS&I	Lessons learned	Policy makers
20	1998	FC	Ministry of Health	MSPAS	Institutionalization of the Systematic Offering of Integrated Reproductive Health Services in Quetzaltenango, Guatemala	DS&I	Integration of services	Providers
21	1998	CA	Ministry of Health	MSPAS	Extension of the Use of the Algorithm in the Guatemalan Highlands	DS&I	Integration of services	Providers
22	1999	CA	Nursing school, Continuous education	EDUCATIONAL	Testing a Continuing Education System in Reproductive Health for Nurse Auxiliaries	Intervention	Training	Providers
23	1999	CA	Population Council	PC	Testing a Tripartite Strategy in San Marcos	Intervention	NGO strengthening	NGOs

24	1999	CA	Population Council	PC	Training for MSPAS and NGOs in Counseling and Family Planning Methods	D&TA	Training	Providers
25	1999	CA	Population Council	PC	Evaluation of Two Training Programs: Training in the Algorithm for Integrated MCH Services and Training in Counseling and Family Planning	Intervention	Training	Providers
26	1999	CA	APROVIME	NGO	Testing the "Blanket Rule" Rhythm Method Among Indigenous Guatemalans	Intervention	Contraceptive choice	Providers
27	1999	CA	Population Council	PC	<i>Reporte del Componente de Reingeniería del Modelo de Atención</i>	Intervention	Service organization	Service organization
28	2000	CA	Population Council	PC	Adapting and testing an algorithm for the Integrated Management of Childhood Illness (IMCI) at the Community Level	Intervention	Child care	Providers
29	2000	CA	Princeton University	EDUCATIONAL	A Strategy that Works: Systematic Offering of Integrated Services for Women and Children	Intervention	Integration of services	Providers

30	2000	FS	APROFAM	IPPF affiliate	Willingness to pay for APROFAM's Services: Pilot test of a price increase for three services.	D&TA	NGO strengthening	NGOs
31	2001	FS	Roosevelt Hospital, Department of Obstetrics and Gynecology	MSPAS	Setting Prices for Reproductive Health Services in a Public Hospital in Guatemala	D&TA	Sustainability	Service organization
32	2001	CA	Sololás Health Sector (MOH)	MSPAS	Reducing Medical Barriers to Family Planning	Intervention	Acceptability/ accessibility	Providers
33	2001	CA	APROFAM	IPPF affiliate	Testing Strategies to Increase Promotional Activities by Promoters	Intervention	IEC	CBD
34	2001	CA	Ministry of Health, Solola	MSPAS	Sololá: Community Strategies	Intervention	IEC	CBD
35	2001	FS	Ministry of Health, Quetzaltenango	MSPAS	Guatemala: Reproductive Health Care in the Post-natal Period	Intervention	Post-obstetric event	Providers

36	2001	CA	<i>Renacimiento</i>	NGO	School-based sex education for Guatemala	Intervention	Sex education	Indigenous
37	2001	FC	Ministry of Health	MSPAS	Situational analysis of post-obstetric event contraceptive services in public hospitals	D&TA	Post-obstetric event	Service organization
38	2001	CA	Procuraduría de los derechos humanos-- Defensoría de la Mujer	OTHER GOV	Promoting Reproductive Health in Victims of Violence or Rape	D&TA	Contraceptive choices	Providers
39	2001	CA	APROFAM, IGSS	IPPF affiliate	Pre-Introductory Study of Norplant	Intervention	Contraceptive choices	Providers
40	2001	CA	Ministry of Health and <i>Universidad de San Carlos de Guatemala</i>	EDUCATIONAL	A Distance Learning Program on Management of Reproductive Health Programs for Health District Directors and NGOs	Intervention	Training	Providers

* Source of funds:

FS = Field support to INOPAL/FRONTIERS

FC = INOPAL/FRONTIERS in collaboration with Cooperative Agreement

CA = Exclusive Cooperative Agreement

Type of study:

Diagnostic and technical assistance: purpose is to understand population's needs and desires or to assess service needs. Technical assistance includes technical counseling to service provision institutions to improve functional areas.

Intervention: experimental or quasi-experimental designs to evaluate the effectiveness of service improvement strategies.

Dissemination, institutionalization, utilization: involves presentations, publications, workshops and other activities aiming to inform audiences of results, achievements or recommendations (see complete description in page 14).

ANNEX 3.
PROCESS AND IMPACT ASSESSMENT OF OPERATIONS
RESEARCH IN GUATEMALA: 1998-2000

ASSESSMENT OF THE
PROCESS AND IMPACT
OF OPERATIONS RESEARCH
IN GUATEMALA:
1988 – 2000

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Executive Summary

Rationale and Objectives

Population Council/Guatemala and the FRONTIERS Regional Associate Director for Latin America proposed this evaluation to document the utilization of the results from the portfolio of OR projects conducted over the past decade in Guatemala.

The objectives of the evaluation were:

- To determine the impact of the OR activities conducted on reproductive health services during this 12 year period, given the substantial level of project activity in Guatemala;
- To provide documentation of accomplishments and shortcomings of this OR work as the current cooperative agreement comes to a close;
- To identify factors that have facilitated and hindered either conduct or utilization of OR findings; and
- To test recent modifications to the FRONTIERS evaluation methodology.

Methodology

The evaluation team consisted of two FRONTIERS/Tulane staff: Jane Bertrand, Professor in the Department of International Health and Development, Tulane University, and Celeste Marin, Evaluation Specialist based in Washington, D.C. Both have worked closely with the evaluation methodology developed under the FRONTIERS Program. Data collection took place in April and May 2001.

The evaluation team relied on three primary sources of data: key informant interviews, document review, and several site visits to health centers and NGOs that have implemented OR interventions. Based on this information, they scored each of the 22 OR projects on 25 process and impact indicators, on a scale of one to three (3 being the highest score). They also collected data on contextual factors, but did not score them.

Results and Discussion

Projects reviewed were largely intervention studies, but included diagnostic and demonstration/evaluative studies as well. Table 1 gives an overview of study types and topics for OR projects during this time period, including those not part of this review. Individual scores for all indicators are presented in Table 2. In addition, the results section includes findings on each indicator, specifically the number of projects achieving the highest score, as well as a discussion of both high-and low-scoring studies on that item. The portfolio of studies performed best on the following items (with the proportion of projects receiving the top score given in parentheses):

- Research was relevant to local program managers (1.00).
- Results were disseminated to key audiences (.91).
- TA was provided in a sound and collegial manner (.89).
- Implementing organization participated actively in the design of the study (.86).
- Implementing organization participated actively in the conduct of the study (.86).
- Study was completed without delays that would compromise validity (.86).
- Results were judged to be credible and valid (.82).
- (If the intervention was effective and continued after the study) the activities tested under the intervention were still observable 36 months post-implementation (.82).
- Continuity in key personnel was maintained (.77).

Table 3 outlines the key findings from the 22 OR studies and indicates the actions taken by the implementing organization based on these results. In 13 of 20 studies (excluding the two that were diagnostic), the intervention proved effective. Four of the studies yielded mixed results, and three interventions were judged not to be effective. In 14 of the 22 studies, the implementing agency acted on the results. The successful intervention was scaled up within the organization in 9 of 17 projects, and adopted by another in-country organization in 5 of 17 projects.¹ Indeed, two USAID-funded projects in Guatemala – Calidad en Salud (URC) and NGO Strengthening (Population Council) – were designed with the expectation that they would take advantage of the lessons learned from this series of OR projects. Research findings did not generate substantial new funding, and project activities were seldom replicated in other countries (presumably because this was not a priority activity, nor were funds dedicated to doing so). However, a number of studies did lead to policy changes, primarily at the program level.

The assessment revealed several areas for improvement. First, several of the studies had too many objectives (making it difficult to fully achieve them) or inappropriate objectives (that described activities to be carried out, not results to be achieved). Second, most organizations did not build sufficient technical capacity to enable them to conduct subsequent OR projects. This finding underscores a dilemma for the Population Council: on one hand, they want to foster maximum skills-building and ownership of results in the implementing agencies; on the other, they are responsible to the donor agency for ensuring quality control at each phase of the research process. As such, they often “step in” to ensure a quality product, but in doing so they may defeat their own efforts at capacity building.

Some important factors in successful OR activities were identified as:

- Charismatic leadership, either from the implementing organization or the research team;
- Close monitoring and supervision of the intervention;

¹ The denominators in this section vary, depending on the number of studies that were applicable to the question. For example, some questions on impact were valid for all 22 studies, whereas others were relevant only for the 17 studies in which the intervention was effective and continued after the study.

- Simple, easy to use materials; and
- A feasible design.

Factors considered to increase utilization were:

- A good match between the intervention and the implementing organization;
- Immediate, observable improvements as a result of the intervention;
- Provider motivation;
- Continuing TA; and
- Fortuitous timing.

Diagnostic studies have been the center of debate on two points: (1) what is their value to an OR program, and (2) should they be assessed using the current methodology? We reviewed two diagnostic studies; two others that were labeled “diagnostic” on the original list were actually demonstration/evaluative studies. Although not all the indicators are applicable to diagnostic studies, this methodology can be used to track utilization of results from diagnostic studies.

Appendices

Appendix A contains summaries of the 22 OR projects reviewed. Appendix B lists the key informants interviewed for the evaluation and Appendix C contains the interview guide/data reporting form. A discussion of three proposed dissemination indicators is presented in Appendix D.

I. RATIONALE FOR THE EVALUATION OF OPERATIONS RESEARCH IN GUATEMALA

Two events prompted this assessment of operations research (OR) projects in Guatemala from 1988 to 2000. First, the Population Council/Guatemala is scheduled to complete a seven year cooperative agreement with USAID/Guatemala in December 2001, designed to investigate more effective ways of reaching the Guatemala population with reproductive health services, particularly in Mayan areas. Second, the FRONTIERS Program has developed a methodology over the past two years to evaluate process and to document utilization of OR results. This methodology has been tested in six countries and is now available for use in relation to other portfolios of OR projects.²

The Regional Associate Director for FRONTIERS, based in Mexico City, and PC/Guatemala staff were interested in documenting the utilization of the results from the portfolio of OR projects conducted over the past decade in Guatemala, and they proposed this assessment to PC/Washington. (The types of studies and the substantive focus the projects addressed are presented in Table 1.) The decision was then made for FRONTIERS/Tulane staff to carry out this assignment, given their familiarity with the evaluation methodology and with reproductive health services in Guatemala.

The Population Council's OR activity in Guatemala began in 1988, under the INOPAL project. At this time, INOPAL's regional office was located in Mexico City, and individual staff traveled to Central America to provide technical assistance on operations research to different service delivery organizations. Under INOPAL I, II and III a total of approximately 15 OR projects were conducted in Guatemala between 1988 and 1998.

In 1994, USAID/Guatemala awarded a cooperative agreement to the Population Council to establish an office in Guatemala City for the purposes of further developing a series of operations research projects with the Ministry of Health and local non-governmental organizations (NGOs) under Cooperative Agreement number 520-0357-A-00-4169-00. The objectives of this agreement were:

1. To develop new research-based strategies for the delivery of cost-effective reproductive health services to rural, Mayan and poor segments of the Guatemalan population;
2. To disseminate and promote the institutionalization of research findings to improve the quality of reproductive health services and to make these services more acceptable and accessible to the Mayan population;
3. To foster inter-institutional collaboration and cooperation;
4. To train Mayan professionals and support the integration of Mayan personnel into the field of reproductive health;
5. To improve the quality and coverage of maternal and child health (MCH) services provided by NGOs in rural areas, especially the Mayan highlands; and

² Bertrand, Jane T. and M. Celeste Marin, 2001. "Operations Research: Measuring Its Impact on Service Delivery and Policy," The FRONTIERS Program, Washington, DC.

6. To improve the management and sustainability of MCH programs carried out by NGOs.

Under this cooperative agreement the Population Council, in collaboration with local implementing organizations, conducted a total of 22 OR projects (defined as having a distinct project number) between 1994 and 2001. This review includes those projects completed by 2000 to allow sufficient time for results to be utilized. (See Appendix A for project summaries.) The Population Council is also involved in five other OR projects in Guatemala under FRONTIERS as well as eight under the cooperative agreement, but these have yet to be completed and are not part of this review.

Guatemala constitutes an excellent site for operations research since the delivery of family planning and reproductive health (FP/RH) services in this country still trails that of neighboring countries. Guatemala has the second lowest contraceptive prevalence rate (38 percent) of any Latin American country; the only lower is Haiti. Whereas 50% of Ladino women married or in union report using contraception, this is true of only 13% of Mayans. Maternal mortality is also high by regional standards: 190 deaths per 100,000 live births,³ with marked disparity by ethnic group. Various factors explain this large gap between Mayans and Ladinos (which exists on almost every possible social indicator). Three-quarter of Mayans live in poverty. The highlands of Guatemala (home to many Mayans) were ravaged by the civil war that reached its peak in the 1980s, crippling many of the social programs in that area. And the Catholic Church has exerted tremendous pressure on the government to curtail family planning services over the various administrations of the past 30 years. Despite this sobering backdrop, progress has been made in improving service delivery and in reaching out to the Mayans with culturally appropriate strategies.

The primary focus on this evaluation concerns the utilization of results to improve service delivery and influence policy (referred to herein as “impact”).⁴ Although we were interested in the quality of research (and measured some aspects of it using the process indicators), our main task was to assess the extent to which these OR studies resulted in observable change in the service delivery environment for family planning and reproductive health.

This evaluation represents a welcome opportunity to apply the methodology previously developed under FRONTIERS in a country with substantial OR activity. This report contains the major findings from the evaluation, as well as observations on the methodology itself.

³ World Bank, *World Development Indicators 2000*.

⁴ We use the term “impact” with some reservation. To meet the test of measuring impact in the rigorous sense of the word, the evaluator needs to be able to demonstrate cause and effect. He/she should be able to show what would have happened in the absence of the program or project. Although we do not meet this standard with the current methodology, we have retained the word impact because it captures the sense that “something changed” in the aftermath of the OR study.

II. METHODOLOGY

A. Objectives of the evaluation

The objectives of this evaluation were:

- To determine the impact of the OR activities conducted on reproductive health services during this 12 year period, given the substantial level of project activity in Guatemala;
- To provide documentation of accomplishments and shortcomings of this OR work as the current cooperative agreement comes to a close;
- To identify factors that have facilitated and hindered either conduct or utilization of OR findings; and
- To test recent modifications to the FRONTIERS evaluation methodology.

B. Composition of evaluation team

Jane Bertrand and Celeste Marin visited Guatemala from April 2-6, 2001, and Marin returned from May 21-26, 2001 to collect data for this evaluation. Both members of the evaluation team are FRONTIERS/Tulane University evaluation staff. Jane Bertrand is Professor in the Department of International Health and Development, School of Public Health and Tropical Medicine. Celeste Marin is Evaluation Specialist under FRONTIERS, based in Washington, D.C. Both have worked closely with the evaluation methodology developed under the FRONTIERS Program, but had no previous involvement in any of the projects in this review.

C. Sources of data

The evaluation team relied on three primary sources of data: key informant interviews, document review, and several site visits to health centers and NGOs that have implemented OR interventions.

In April 2001 the team conducted key informant interviews in Guatemala City with Population Council and collaborating researchers, administrators and managers from implementing institutions who were involved in the study, representatives from USAID/Guatemala, and “potential users” — individuals in a position to utilize OR results. The team also interviewed providers in Sololá. In May 2001 Marin conducted additional interviews on site in Quetzaltenango, San Marcos, and Totonicapán with area administrators, service providers, and NGO staff, including rural health promoters. A list of all persons interviewed is presented in Appendix B.

The evaluation team used the Assessment Form (see Appendix C) as an interview guide. Although most key informants were able to answer only some of the questions from the assessment form, the team interviewed several individuals per project, which yielded sufficient information to complete all grids on almost all indicators.

In addition to interviews the team reviewed project reports and other documents on the design and implementation of the studies. Each study had a final report in English or Spanish, and most were summarized in publications such as “Findings and Lessons Learned in Delivery of Reproductive Health Care to the Rural Mayan Population of Guatemala from Operations Research and Diagnostic Studies, 1994-1997,”⁵ *El Pregón*, a magazine aimed at NGOs, or brief handbooks for program staff or government officials describing the merits of a study or how to replicate the intervention. The final report in particular was used to evaluate the studies on the indicator P-9, “Was the study design methodologically sound?”

D. Limitations of the methodology

There are several limitations to this approach to assessing impact of OR projects. First is the issue of attribution. Other organizations in Guatemala have been conducting related activities, and events may have occurred concurrently that encouraged service delivery organizations to adopt changes, independent of the OR study. Thus, it is virtually impossible to demonstrate cause and effect in this type of assessment of impact of OR studies. Rather, we seek to demonstrate “plausible attribution,” which requires that 1) those implementing the new procedure or approach know of the OR results, 2) the change in service delivery take place after the intervention, and 3) the change that occurs is consistent with the results and recommendations of the OR study.

Second, turnover of staff in government and NGOs and physical inaccessibility made it difficult to locate some individuals who participated in a study or were potential users of the findings. In some cases, those who had participated in the project could not be found, and their replacements had very little knowledge of project activities. We interviewed a minimum of two informants for each project, but in some studies we gathered information from more sources than usual to minimize the effect of not being able to contact a key person. This problem resulted primarily from the lapse in time between the completion of many of these studies and this review. It is not an inherent flaw in the methodology and should not be a problem when the methodology is applied prospectively to the portfolio of FRONTIERS projects.

Third, the assessment of process and effect is qualitative in nature. The evaluation team must gather information from various sources and make subjective judgments in rating a specific project on a specific indicator. However, the approach is systematic; a set of

⁵ Population Council/Guatemala. 1998. *Findings and Lessons Learned in Delivery of Reproductive Health Care to the Rural Mayan Population of Guatemala from Operations Research and Diagnostic Studies, 1994-1997*. New York: Population Council.

indicators was applied to each subproject using a predetermined discussion guide. When the responses of various informants were combined they usually supported one another, and, in cases where they were contradictory, additional information was gathered to determine how to rate the project on that indicator.

III. RESULTS

A. Projects reviewed

A complete list of all projects included in this review appears in Tables 2 and 3. It proved important to differentiate between the different types of studies (see column 2 of Table 2). The types of studies, from least to most “rigorous,” are as follows:

- Technical assistance (0)⁶
- Diagnostic (2)
- Demonstration/Evaluative (9)
- Intervention (11)

Although the lines blur between the different types of studies, we defined the study types as follows:

Technical assistance: attempted to strengthen the different functional areas (supervision, training, IEC/counseling, MIS) with the aim of improving service delivery in previously established programs.

Diagnostic: consisted of research for the purposes of better understanding the target population, their motivations and fears, their language and perceptions, and other factors relevant to their potential acceptance of a given reproductive health intervention.

Demonstration/Evaluative: involved some collection of data to measure trends in utilization, client satisfaction, or other behaviors, with the intention of documenting results or identifying areas in need of improvement. The term “demonstration” is often used when a new service is offered for the first time.

Intervention: involved some type of experimental or quasi-experimental design to evaluate the effectiveness of the treatment against a second strategy or the status quo.

The methodology for evaluating OR projects is most appropriate for the last two types (demonstration/evaluative and intervention) because the impact questions on scaling up, replication and so forth are relevant. At the request of the Population Council, we also included diagnostic studies. Given that they can serve to “test the waters” for the potential acceptability of new reproductive health interventions, it is appropriate to ask, “What happened in terms of service delivery as a result of these diagnostic studies?”

⁶ This category refers to projects that are exclusively technical assistance, without any research component. The vast majority of the 22 projects included some aspects of TA, but it was in addition to the research component. The PC representative for project #10 described this project as being “basically TA,” but we chose to label it as demonstration/evaluative, based on the criteria listed in this section.

B. Format for presenting the results

The results of this assessment are presented in several ways. First, the overall result for each indicator (expressed as the number of projects of the total reviewed that receive the highest score [3]) is presented as a bullet, in bold. Although this review covers 22 studies, the denominator for “total number of studies” drops as low as 17 in those cases where the question is not applicable (e.g., the items on scaling up interventions were not applicable to diagnostic studies).

Each project is scored on each indicator using a scale of one to three, with the numbers corresponding to the following definitions:

- 1** — slightly or not at all (up to 1/3 of potential)
- 2** — somewhat (1/3 to 2/3 of potential)
- 3** — a great deal (2/3 to full potential)

This scale distinguishes between those studies that performed well (3), those that performed satisfactorily but with notable problems (2), and those that did not perform satisfactorily on the relevant indicator (1).

The indicators fall into two main categories: process and impact. Within these two main categories certain indicators cluster naturally, as indicated by the underlined subtitles in the section below. The numbers in parentheses (e.g., “P-4,” “I-5”) refer to the numbers of the process and impact indicators, respectively, as they appear on the data collection instrument, shown in Appendix C.

We also collected data on six contextual factors, but rather than presenting them in the same format as the process and impact indicators, we have woven them into the text where they are relevant. The contextual factors are not used to “rate” a project but rather to understand what factors beyond the control of the program managers and researchers affect the study and utilization of its results.

Second, after each bullet we have provided a more qualitative assessment of the point, bringing to light material that emerged during the interviews with key informants.

Third, Table 2 provides a tabulation of results for all 22 studies across the 14 process indicators and 11 impact indicators.⁷ This allows one to assess the overall performance of each study (the “perfect score” being a column of 3s) and the performance of the

⁷ Note: there is no P-13. Whereas one might assume this reflects the North American aversion to the number 13 as unlucky, in fact it is omitted for a different reason. In previous versions of the instrument, it referred to whether a study included a cost analysis. We subsequently realized that its inclusion in the grid implied that all studies SHOULD include a cost component, which is not the case. Thus, we moved the item related to cost to the section on “contextual and other factors,” to avoid its counting on this score sheet that some will interpret as a report card. We have retained the original item numbers so the indicators would be consistent with the numbering systems in other OR evaluations.

portfolio of studies on specific items (the perfect score being a row of 3s for that indicator). The final columns on Table 2 show the number of studies scoring a three over the total number of applicable studies for that item; this is translated into a proportion of studies scoring 3 in the final column, with a possible range of 0.00 (none) to 1.00 (all).

The numbering of the projects from 1 to 22 was done (1) for the convenience of the evaluation team and readers of this report, and (2) to establish the sequence of projects conducted by a given organization (e.g., APROFAM: #1-6, AGES: #7-9). It does not correspond to any Population Council numbering system.

C. Results for process indicators

Collaboration between the Population Council and implementing agencies

The main implementing agencies were the Ministry of Public Health and Social Assistance (referred to hereafter as “MOH”) (n=5 studies), the Guatemala Social Security Institute (IGSS) (n=2), Asociación Pro-Bienestar de Familia (APROFAM) (n=5), and Guatemalan Sex Education Association (AGES) (n=3). In addition, the following organizations carried out one OR study each with the Population Council: Asociación Pro Salud Preventiva para la Mujer Vivamos Mejor (APROVIME); AGROSALUD; Asociación Toto-Integrado (ATI); Promoción, Investigación y Educación en el Salud (PIES del Occidente)/Cooperación para el Desarrollo Rural de Occidente (CDRO); Project Concern International (PCI); Rxiiin Tnamet and Universidad del Valle.

- **In 19 of the 22 studies, the implementing organizations actively participated in the design of the study (P-1).**

This group of studies got high marks for the active collaboration of implementing organizations in the design of the study. Many key informants spoke of the animated discussions that they had with Population Council staff in identifying priority topics and deciding which to select for an OR study.

However, on more than one occasion their participation was limited to agreeing to the design proposed by the Population Council. Whereas the implementing organization clearly recognized the relevance of the topic to a problem they faced, it was often the Population Council staff and not the organization per se that identified the problem. We revisit the issue of the appropriate role for the technical assistance organization in the discussion section below.

- **In 19 of the 22 studies, the implementing agencies actively participated in the implementation of the study (P-2).**

As a group, the implementing organizations also reported a high level of participation in the actual conduct of the study. This included one or more aspects of designing the questionnaire, recruiting the field personnel, pre-testing the instrument, collecting the data, cleaning and processing the data, analyzing the data, and writing the report.

However, the “high score” on this indicator masks the fact that many organizations participated in some but not all of these tasks. The Population Council conducted and managed the MOH and IGSS studies, as these organizations had little to no experience in operations research for reproductive health. APROFAM, an organization with OR experience and research personnel, often found it difficult to free up its regular employees to work on its OR projects and instead hired consultants to oversee the conduct of the research. This strategy was very effective in completing the projects but resulted in more limited “ownership” by APROFAM once the study was done.

Despite participation in specific parts of the project implementation, the implementing organizations did not necessarily increase their capacity to do operations research; field supervisors, coordinators and analysts were generally Population Council staff or consultants, and local level staff carrying out the intervention did so with training and assistance from the Population Council.

- **In 13 of the 21 studies, the implementing organization actively participated in developing programmatic recommendations (P-6).**

Recommendations were usually developed in the course of writing the final report. If Population Council staff alone wrote the report, they proposed recommendations and solicited feedback from their counterparts. In these situations the implementing organization had some input on the final conclusions and recommendations, albeit less than the Population Council. In other instances Population Council and the implementing organization jointly prepared the final report, leading to more balanced participation.

There were two important exceptions to the above patterns. In the first case, a representative from the National Nursing School approached the Population Council for assistance in developing a distance education program (#20). The Nursing School had a major role in designing and implementing the intervention and in developing the recommendations. In a second case, an anthropologist from a local university received terms of reference (and little more) from the Population Council for the study of cognition and speech patterns concerning reproductive health among Mam speakers in Quetzaltenango (#3). He and his staff designed and conducted the study and prepared the final report, complete with conclusions and recommendations, with only logistical assistance from the Population Council.

- **In 17 of the 19 studies, the counterparts in the implementing agencies judged that the technical assistance was useful, methodologically sound, and provided in a collegial manner (P-8).**

The key informants were uniformly positive, even glowing, in their praise of the technical assistance that the Population Council provided on the OR studies. They felt it was both methodologically sound and delivered in a very collegial manner. Many spoke with great affection of the different Population Council staff members that had worked with them on the different studies. Negative comments were rare. In one case, previously cordial relations seemed to sour as the project ran into insurmountable problems and was not able to achieve its objectives (#9). In a second case, different key informants remembered the attitude of the consultant in slightly different terms. Note: three studies were excluded on this indicator: one because it did not receive technical assistance from the Population Council (#13), and two because we were unable to obtain the information from the appropriate individuals (#12 and #14).

Quality of study design and implementation

- **In 12 of the 21 studies, the study design was judged to be methodologically sound (free of flaws that could have affected the final results) (P-9).**

On the whole, the studies evaluated were methodologically sound. Indeed, no study got a score as low as “1.” Rather, a number of the studies only scored a “2” (indicating some problems on this indicator), due to data quality, loss to follow-up and designs that were not sufficiently scientifically rigorous for this type of research. For example, a diagnostic study of TBAs’ knowledge (#16) was conducted prior to developing a training curriculum, but acquired knowledge was measured using a post-test only design with a separate sample. Another threat to some designs was that service statistics and other existing data to be used were not always available or reliable, so either alternate strategies had to be developed (with mixed success) or certain objectives could not be achieved or measured. Such was the case in the TBA study (#16) and the tripartite strategy in San Marcos (#21).

- **In 13 of the 20 studies, the intervention was implemented as planned (or with some modifications) (P-4).**

Most interventions were implemented as planned, but there were a few notable exceptions. The AGES project on “Access to Reproductive Health Services and Education in Indigenous Communities” (#9) ran into serious problems in introducing a service delivery component. Similarly, the APROFAM project to introduce reproductive health education to men (#3) proved particularly challenging, and the original strategy involving formal health education talks was abandoned in favor of more recreational and athletic activities. The ATI-APROFAM study (#14) did not even make it beyond the diagnostic stage; the two NGOs spent a great deal of time clarifying their relationship and

had major funding problems, so the study ended early and the intervention was not implemented at all.

- **In 19 of the 22 cases, the study was completed without delays that would compromise the validity of the research design (P-5).**

Many studies had delays but these tended to occur in the start up. In most cases the end date was simply pushed back to accommodate the intervention and the delay had no impact on the design or results. In others, such adjustments were not possible. The proposal for the distance education course (#20) had to be rewritten to gain approval and, as a result, the final module of the course could not be completed before the study ended. The reproductive health educational strategies for men (#3) experienced such difficulty identifying activities that would attract men that they had insufficient time to conduct and evaluate these activities. Not surprisingly, the evaluation showed little effect of this strategy on client behavior.

- **In 17 of the 22 studies, there was continuity in key personnel over the life of the project (P-7).**

The large majority of studies enjoyed continuity of key personnel over the life of the project. However, there were some exceptions. The APROFAM project on re-engineering the CBD program (#5) experienced significant difficulties with turnover not only of the principal investigator, but also the executive director of the organization and other key administrative personnel.

In other cases, key personnel were maintained throughout the studies but not necessarily beyond completion, limiting utilization. For example, in the TA activity “Strengthening Knowledge and Management Skills for MOH Family Planning National Supervisors,”⁸ all trained supervisors were transferred, fired or resigned immediately following the training, leaving absolutely no impact.

Although this indicator is worded to imply that continuity is positive, in a few cases a change in key personnel proved to be an advantage. For example, the current MOH administration is much more supportive of family planning and reproductive health than the previous one, and more committed to improving quality and access to services.

- **In 13 of the 22 cases, the study accomplished the research objectives (P-3).**

A common problem in a number of the OR studies was an overly ambitious research agenda. Some of the research projects had up to ten objectives, making it difficult to realize them in full (see discussion section below for additional observations on the

⁸ This project was originally included in this evaluation but later removed because it was a TA activity and not an operations research study.

achievement of objectives for these OR projects). Only two of the 22 studies (#9, the AGES study on Access to Reproductive Health Services and Education in Indigenous Communities, and #14, Collaboration between Two NGOs, ATI and APROFAM in the Delivery of Family Planning Services) fell entirely short of the mark, and low scores on this indicator were associated with low scores on P-4, “The intervention was implemented as planned.” Had the objectives been less ambitious, it is likely that a larger percentage of the studies would have received a top score on this indicator.

Appropriateness to local context

- **In 15 of the 22 studies, the research design was feasible in the local context (P-10).**

This seemingly straightforward indicator proved multifaceted in its application. “Feasible” can refer to either the study design or to the actual implementation. If it refers to the design, it relates to the previous indicator about achieving the research objectives. For example, an early APROFAM study (#1) on testing different training and supervision strategies among Mayan communities proved to be more challenging and placed a greater research burden on the service delivery organization APROFAM than they had anticipated. It proved difficult to avoid contamination between the experimental and control groups, given program dynamics.

Examples related to implementation include the following. (1) Many of the IGSS-affiliated TBAs (#16) were illiterate and could not keep service statistics. An alternate strategy to track referrals by issuing clients cards did not work, so no conclusions could be reached on referral rates. (2) The IMCI study (#22) struggled with an overly complex analysis plan. (3) The ATI-APROFAM (#14) collaboration suffered from internal problems (interpersonal conflicts and miscommunication between the two organizations) as well as external difficulties, including insufficient funding for both NGOs. While neither internal problem was caused by the study design, they might have been avoided by allowing more time at the beginning of the study to develop the relationship between the two NGOs.

In short, factors that caused the research design not to be feasible included: (1) the need for rigorous controls in studies with a quasi-experimental design, (2) data collection by illiterate health workers, and (3) data analysis that exceeded the capacity of those expected to do it.

- **In 22 of the 22 studies, the research was judged relevant for local program managers (P-12).**

All studies were relevant to the priority populations for this Cooperative Agreement: indigenous groups in the western highlands or (in the case of IGSS) workers employed in the formal sector. The studies tested proposed solutions to important problems or

facilitated the later development of appropriate solutions through formative research. Existing reproductive health services were modified to provide a broader spectrum or better quality of care and, in situations where reproductive health services were not yet offered (such as on agricultural farms or in postpartum/postabortion wards), they were incorporated into existing services, taking advantage of the infrastructure available.

- **In 18 of the 22 studies, the results were judged to be credible/valid in the local context (P-11).**

Virtually all of the interviewed informants — including researchers, administrators and providers — believed that the results and recommendations that they knew about were credible and valid. Although many knew of results only from a few specific studies, they regarded all Population Council activities to be of high quality and judged Population Council presentations and publications to be reliable sources of information. (In a previous report, we referred to this as a “halo effect”).

Several of the informants did say that “some providers” were not so convinced by the study results and did not want to follow the recommendations. In particular, these other providers did not use the MOH algorithm because it took up too much time and they were unable to see any benefit in offering women services they were not seeking. However, the “key audiences” (policymakers, program managers and other decisionmakers) were unanimous in their high opinion of the credibility and validity of OR results from the Population Council.

In two of the studies that received a “2,” key informants questioned whether the results had even been diffused, making it difficult to give this project a top score. In another case (#13), a senior Population Council staff member expressed strong doubts about the recruitment of the study population and therefore the validity of the results. The PI also presented the results recently at an international conference on men in reproductive health in Buenos Aires to a mixed response, which he attributed to the incompatibility of his findings (that Mam men associate sex with sadness and guilt, among other things) with the more widely held views on “machismo.”

Dissemination

- **In 20 of the 22 studies, results were disseminated to key audiences, including policymakers, program managers, and service providers (P-14).**

The studies had no uniform dissemination strategy, but in nearly all cases the Population Council used more than one approach to reach key audiences. The minimum requirement of all studies was a final report, but for most studies the Population Council also produced a summary of results or a booklet containing guidelines for replicating the intervention. In this way different audiences received results in different formats according to their needs. In 2000 PC/Guatemala began publishing *El Pregón*, a magazine for the NGO community. This magazine contains articles about reproductive health research and activities, as well as news on related topics such as adolescents, community

development and violence. It is distributed to a number of NGOs directly and to others through international organizations. Project Concern International (PCI), for example, distributes copies to the NGOs with whom it collaborates and praised *El Pregón's* content and simplicity. Population Council staff and their research partners also disseminate research findings through presentations. Results are usually presented first to local staff that participated in the intervention and then at the central level, often at the collaborating institution as well as the Population Council office. The Population Council also convenes an interagency Reproductive Health Working Group that meets regularly, providing a forum for such information exchange among USAID, CAs and NGOs working in the reproductive health field.

Different research projects target different “key audiences” for utilization. In the MOH and IGSS, for example, only one or two key individuals need to be convinced of the merit of the research, since they are the main reproductive health decisionmakers. Because these key people are also involved to some degree from the beginning of the study, dissemination takes place throughout the entire process, not only at the end. In other studies, for example the diagnostic study of the Mam, much more dissemination is needed as those who are in a position to utilize the findings provide services in other organizations. (In this case the final report, several summaries, and presentations in three locations proved inadequate.)

Informants made several comments about shortcomings in dissemination. One IGSS representative said that they never saw a final report or summary of the TBA study, which was completed four years ago. The only report prepared was in English, which was of limited use to them. It was not clear whether they had ever addressed this with the Population Council, but the informant did ask the evaluation team for a Spanish summary of the results because people continue to ask him about the study. Another informant complained that in general, research is not presented at an appropriate level for users. He said the Population Council was no exception and should invest more effort in simplifying dissemination materials and reaching wider audiences. Although he does not currently collaborate with the Population Council, he is a key figure in the reproductive health community.

While the above media have proven effective for promoting utilization, the Population Council has the benefit of two other USAID-supported mechanisms: *Calidad en Salud* and the NGO strengthening component of the cooperative agreement.

Calidad is a consortium of reproductive health organizations that provides technical assistance to the Ministry of Health. Two Population Council staff seconded to Calidad played important roles in OR at the Population Council, and the organization relies on many Population Council materials and lessons learned in its work. According to one, “We are now reaping the benefits of our years of hard work and research.” The Calidad-Population Council link has accelerated the pace of utilization of OR findings and OR-generated materials such as job aids, training manuals and IEC materials. While Calidad is not adopting all Population Council interventions as is (some aspects must be modified

to apply to the whole country, not just the western highlands), OR products and results do form the basis of much of the TA provided.

The NGO strengthening component functions in a similar but more direct manner. The Population Council itself provides the TA, and NGOs — being smaller and more independent than a large institution like the MOH — can implement changes more easily. Some NGOs (CDRO, B'elejeb B'atz, PIES del Occidente) have participated in an OR study. Others have not conducted OR but have used OR results to improve their own services after seeing the effects on other organizations. The continuing interaction inherent to the Population Council-NGO relationship promotes not only adoption but also institutionalization of changes, while maintaining enough flexibility to ensure that the intervention remains a good fit for the organization. The NGO strengthening component allows the Population Council to pair operations research and technical assistance to maximize the impact of both.

- **In 15 of the 22 studies, results were readily available in written form to interested audiences (P-15).**

The scoring on this item was somewhat arbitrary but used the following rule: if the results were included in a publication that received wide circulation, the study got 3 points (the highest score possible); if the results existed only in the form of a final report, it received 2; and if there was no report on file it received 1 (though no project scored a “1” on this indicator).

D. Results for impact indicators

Intervention effective, acted on

- **In 13 of the 20 studies, the results indicated that the intervention was effective (i.e., that it improved service delivery in areas identified by the OR study) (I-1).**

The indicator I-1, “the results indicated that the intervention was effective,” was primarily intended for intervention studies (of which there were 12). However, we have broadened it to include demonstration/evaluative studies, which allowed us to review all but two (the “purely diagnostic” studies).

Table 3 summarizes the key findings from all 22 studies reviewed. In the 20 studies involving an intervention, 13 showed the intervention to be effective (i.e., as a result of the intervention the project achieved its stated objectives). Based on a purely qualitative assessment, the following six interventions that stood out as “most effective” (listed here by number, with a one-line summary of the main finding):

#4 Injectables: Depo-Provera can be distributed through CBD promoters at the community level.

#6 Referrals to APROFAM clinics: The strategy of bringing promoters to the clinic and training them onsite is more effective than the status quo training system in

increasing the number of referrals they make to APROFAM clinics, but it also is more expensive than the status quo.

#11 Necklace: The necklace method for facilitating the use of rhythm was both effective in preventing pregnancy and acceptable to Mayan couples who elected it.

#15 Postabortion care: Many women not using family planning will adopt a method if services are more convenient (in particular if they can get a method right away).

#19 Algorithm: Offering integrated reproductive health and infant services systematically through a standard set of questions asked of all women regardless of the reason for visit improves quality of care and client satisfaction.

#21 Re-engineering of MOH clinics: When providers feel they have the ability to make changes and can see the benefits, they are willing to work harder to provide quality care; in turn, satisfaction of both clients and providers increases.

Four of the 20 studies yielded mixed results — the intervention was not effective as such, but some part of the study was adopted and used to improve service delivery. For example, the first algorithm study (#17) showed that in several cases the control group outperformed the experimental group, but those doctors who used the algorithm regularly in their consultations (some of the experimental group doctors did not) consistently outperformed the others in both groups. As a result, the algorithm was seen to be a potentially effective tool and the Population Council and MOH collaborated to modify and test it in subsequent studies. In a second case, training TBAs (#16) did not prove to be a cost-effective strategy for improving the quality of care for rural pregnant women in the IGSS system, but the researchers found the supervisory system introduced under the project reinforced the training and effectively maintained and improved quality. The study also demonstrated that including self-esteem in training for community workers could increase the learning and retention of knowledge and skills.

Of note, three of the 20 interventions were judged **not to be effective**. This underscores a very important point: not all interventions or strategies in an OR portfolio will “work.” If we could assume a near 100% success rate, we would not need to conduct the studies themselves but rather we could direct all funds into implementing the interventions. However, it is exactly because “some will work, and some don’t” that OR serves such an important role in providing evidence-based guidance to program managers who must select between options.

- **In 14 of the 22 studies, the implementing agencies acted on the results (I-2).**

This indicator applied to all 22 studies and measured whether the organizations under review took specific measures – consistent with the results of the study – to improve service delivery. We defined “acted on” as continuing to implement the activities tested in the OR study after its completion if effective, or **not** implementing or discontinuing the activity if ineffective.

The scores for I-2 (whether the implementing organization “acted on” the results) tended to correspond to the score for I-1 (whether the results indicated that the intervention was effective). The organization acted on the results in every case where the study received a top score on the effectiveness of the intervention, with one exception (improving client referrals to APROFAM clinics, #6). In that study, the lack of utilization related both to turnover in top-level personnel and the cost associated with the more effective strategy.

In the evaluative study on re-engineering the CBD program (#5), APROFAM took very concrete actions: reducing the number of distributors by eliminating some of the less productive ones and adopting a profile of the ideal CBD workers in Mayan areas (for future recruitment).

In the case of demonstration/evaluative projects, services introduced were maintained and in some cases scaled up (re-engineering of MOH health center services [#21] and FP counseling and methods for postpartum/postabortion women [#15]). The results of interventions that were only partially effective were acted on less completely. For example, the results of the TBA study showed that training could improve the knowledge and skills of TBAs, but IGSS chose not to act on this because even a large investment in training would have little impact at the population level; most TBAs attended about three IGSS-affiliated births per year, while the maternal hospital attended approximately 15,000. A small number of TBAs attended many births, but IGSS’s equity policy did not allow for selecting only certain individuals for training.

- **In 14 of the 17 studies, (if the intervention was effective and continued after the study) the activities tested under the intervention were still observable 36 months post-implementation (I-3).**

Overall, those organizations that had acted on the results of an OR study tended to stick with the new strategy or intervention for a substantial period thereafter. (Note: although the item stated “36 months,” we scored five interventions on this item that had been implemented more recently than 36 months because all evidence suggested the intervention was “there to stay”). The proportion of interventions that “stuck” is relatively high: 0.82.

Evidence of capacity building on OR

- **In 16 of the 22 studies, the implementing organizations conducted subsequent OR studies (I-4).**

Ideally, the experience of conducting an OR study should serve to increase the technical capacity of implementing agencies to subsequently use this technique in relation to other problems. The evaluation addressed this question in two forms: “Did the implementing agency conduct subsequent operations research?” and “Did the implementing agency conduct subsequent operations research without the assistance of the Population Council?” (the latter presumably being more difficult).

In 16 of 22 cases the implementing organizations conducted subsequent OR. This result masks the reality, however, that three organizations – the MOH, APROFAM, and AGES – each conducted at least two OR studies in this portfolio and thus are credited with “subsequent OR” when in fact they were simply conducting more studies under the same funding mechanism.

The response varied greatly by organization. For example, given that APROFAM has a long experience with applied research, it is not surprising that they received the top score across the board on this indicator. The MOH received the top score, in large part because of the subsequent rounds of testing for the algorithm with the Population Council. In contrast, the studies conducted with smaller NGOs or the local university researcher were a “one shot deal,” in which the researcher or organization did not conduct subsequent operations research.

Both the MOH and IGSS had numerous problems in providing services and realized that working with the Population Council could help them solve these problems. As a result they have been willing to collaborate with the Population Council on numerous studies, continuing to present day, although neither institution seems to be interested in conducting OR without Population Council assistance. Both MOH and IGSS conduct some research, but it consists primarily of epidemiological research or analysis of service statistics.

- **In 8 of the 22 studies, the implementing organizations conducted subsequent OR studies without the Population Council (I-5).**

The pattern of subsequent operations research **without the assistance of the Population Council** was even more dramatic. The only organizations that answered affirmatively to this question were APROFAM, AGES, and APROVIME (staffed by previous APROFAM employees).

When asked whether IGSS would continue to do operations research without technical assistance — or even desire to — an informant from IGSS stated, “IGSS does not have a culture of research. Our main interest has always been in providing services.” Similarly,

the Ministry of Public Health does not have or anticipate having a research unit or staff with the capacity to conduct OR but, unlike IGSS, it does work closely with a research NGO, the Center for Epidemiological Research in Reproductive (CIESAR). Recently the MOH and CIESAR have jointly collaborated with WHO and PAHO, and organized a regional PAC conference with the Population Council. It is possible that this group will continue to carry out research activities with the MOH as a parallel institution for the long-term, much as the Nutrition Institute for Central America and Panama (INCAP) conducts nutrition research with the MOH.

Scaling up and replication

- **In 10 of the 17 studies, (if the intervention was effective and continued after the study) the intervention was scaled-up by the original implementing organization in the same country (I-6).**

This item and the next two (I-7 and I-8) were asked of only 17 studies; the two diagnostic studies and the three interventions that were not shown to be effective were excluded.

Sixteen of the 17 projects were scaled up to some degree, but we assigned six of the projects a “2” instead of a “3” because we considered the scaling up to be limited. Of the ten projects more fully scaled up, examples that stand out include the distribution of injectables by CBD workers in APROFAM and the promotion of the necklace method by indigenous NGOs. Systematic offering of integrated services through use of the algorithm (#17-19) was scaled up gradually through the three studies in this evaluation, in the areas of Chimaltenango, Totonicapán, San Marcos, Quetzaltenango and Sololá. The Ministry of Health is now preparing for a complete, nationwide scale up. Scaling up of the Community IMCI intervention (#22) has been quicker. The Community IMCI is a modified version of MINE (Manejo Integrado del Niño Enfermo), which had been in use for several years prior. In addition, IMCI is a tool recommended by WHO and PAHO, giving it greater credibility than one developed by the Population Council alone. But perhaps the most important reason for the widespread use of IMCI is that it responds to the more urgent health needs of Mayan communities: acute childhood illnesses which service providers and community promoters must deal with regularly. In this context it has been important to improve not only reproductive health services but also primary care for children. As a result, community health promoters can respond to more needs of the populations they serve, increasing respect for their work. The Population Council has plans to combine the two algorithms into one MCH instrument in the future.

Technical assistance for re-engineering, the primary component of the tripartite strategy tested in San Marcos (#21), was available for those health centers choosing to participate immediately following the study. The intervention was also adopted by two other Health Areas, Sololá and Quetzaltenango, but only carried out in Sololá because Quetzaltenango’s director was replaced, and the new director was not interested. Those centers in San Marcos that did not choose to participate immediately after the study but have since changed their minds have not been considered by the Health Area for scaling up, and continue to operate as they had in the past.

As a smaller institution with few hospitals, IGSS was able to scale up postpartum/postabortion family planning services fairly easily (#15), and implement the new supervisory strategy system-wide (#16). While not yet implemented beyond the original area, the Nursing School's distance education project (#20) is available to new nurses entering the system, thus increasing the number participating in the course.

- **In 5 of the 17 studies, (if the intervention was effective and continued after the study) the intervention was adopted by another organization within the same country (I-7).**

Replication of OR interventions by other organizations has occurred almost exclusively through the NGO strengthening component of the cooperative agreement. The two algorithms, for FP/RH services and childhood illness, have been most applicable to the needs of these NGOs. They are used with differing levels of adherence — one NGO now requires prior experience using the reproductive health algorithm of all new doctors, while the other NGOs have a policy mandating its use but acknowledge that a number of their doctors don't use it at all, or do so irregularly. The NGOs that don't require doctors to be previously trained may have difficulty maintaining trained staff without financial assistance from the Population Council, as their own funds are very limited, and doctors leave frequently for more prestigious, urban jobs.

Calidad en Salud provides technical assistance to the Ministry of Health using materials and lessons learned from the Population Council OR (as well as from other organizations) but this cannot be considered as replication by another organization, as the Population Council is a member of the consortium.

- **In 0 of the 17 studies, (if the intervention was effective and continued after the study) the intervention was replicated in another country (I-8).**

No one interviewed in Guatemala was aware of any intervention being replicated outside of the country, but many acknowledged that even if an intervention had been replicated, they would not necessarily know about it. Those outside of Guatemala who had a broader view of reproductive health programs in the region suggested that two interventions in particular had been replicated elsewhere: use of the "necklace method" for fertility awareness and natural family planning (#11 and #12), and the algorithm for providing systematic integrated health care services for women and infants (#17 – 19).

The necklace is indeed being used or tested worldwide by the Population Council, local NGOs and Georgetown University's Institute for Reproductive Health (IRH). Because the Population Council first decided to test the effectiveness and acceptability of using a necklace to teach fertility awareness after reading about a necklace being used in Cote D'Ivoire, they cannot claim to be the originators of the tool. Nevertheless, the necklace component of the 1992 AGROSALUD study (#12) does predate any other research or use of the necklace in Guatemala by several years. Following the AGROSALUD study, Population Council/Brazil asked for the final report and went on to conduct an OR study on the necklace as a family planning tool. IRH reported basing their studies on a necklace

used in Brazil. We were not able to determine to what extent the Guatemala study influenced the Brazil study, nor whether the woman who told IRH of her experiences in Brazil had any connection with the Population Council study, but we consider it plausible that the AGROSALUD study did impact later work within and outside of Guatemala.

PC/Guatemala and PC/Mexico (who had coordinated the AGROSALUD study before the Guatemala office opened) collaborated in designing the 1997 APROVIME study. The Deputy Director of INOPAL, who was involved in the process, considered the success of the necklace with AGROSALUD to be an inspiration for further research. He reported visiting a Georgetown study site in the Guatemalan highlands while developing the new project and finding that IRH had not yet begun to use the necklace in its research. Later, Georgetown and APROVIME collaborated on natural family planning research.

More recently, a Miami-based television crew for the program *Ocurrió Así* traveled to Guatemala to film a story on the necklace method. *Ocurrió Así's* Guatemala correspondent said that they chose the topic because the method eliminates many of the barriers to contraceptive use faced by Guatemalan women and has relevance for women of Latin American origin in many countries, including the United States. Telemundo broadcasts the program throughout North and South America, and in some European countries. Although the story just aired in June 2001, several organizations from El Salvador, Nicaragua and Honduras have contacted the station and expressed a desire to collaborate with APROVIME to offer the method in their counties.

Because the algorithm for integrated services has not enjoyed the same international popularity as the necklace, the links between the Guatemala studies and algorithms adopted in Mexico, Honduras and Bolivia are easier to trace. Regional staff based in Mexico worked with Population Council staff and Ministries of Health in these countries to develop country-specific tools based on the concept of the Guatemalan algorithm. The impact was greatest in Honduras, where the elaboration of the algorithm coincided with the revision of national norms by the MOH. However, each algorithm was developed using a more streamlined process than the three algorithm studies in this review (#17-19), and tailored to the needs of a specific country — for example, the format for the Honduran version entitled *Guía de Atención Integral de la Mujer* (Guide to Integrated Services for Women) is not a list of questions but a flipchart with descriptions of services to provide on the back. Because both the development and testing process and the product varied somewhat from country to country, we gave the algorithm studies a score of “2” rather than “3” on this indicator.

Whether the above were replications of Population Council interventions or new research or activities inspired by previous studies, the vast majority of projects were not used to improve reproductive health services in other countries. The two most likely reasons are the predominantly local dissemination of study results and the unique characteristics of the Mayan populations in the western highlands, for which most of the interventions were designed. It should also be noted that international replication was never an explicit objective to be achieved by the OR projects.

Policy changes

- **In 6 of the 19 studies, there was a change in policy that can be linked to the OR project (I-9).**

The most substantial nationwide policy change attributable to any of these studies has been the inclusion of the algorithm (#19) in the MOH norms.⁹ Other changes have been more local (e.g., in the Health Areas of San Marcos and Sololá) or within NGOs or IGSS. Policy changes at these levels have been quite common and generally consist of incorporating the intervention tested into standard operating practice. The first algorithm study also included the introduction of Depo-Provera, with providers trained by Population Council staff. The MOH was so pleased with the outcome that it granted permission to provide Depo only to providers trained by the Population Council. This policy was later changed in response to the growing demand.

Additional funding

- **In 8 of the 22 studies, the original donor funded new or expanded program activities based on the results of the OR study (I-10).**

Several studies led to additional funding, but rarely from new sources. The results of this and previous work suggest that OR results are used to guide the program decisions of groups already receiving funds from a donor (e.g., USAID), but they do not seem to attract new funds from that donor.

Any funding for new activities tended to come from the original source (i.e., the organization implementing the study) or from USAID through Calidad en Salud. Large plantation (*finca*) owners who support AGROSALUD committed larger sums of money following the OR project (#12). The Population Council went on to fund further research or technical assistance, but funding has generally been provided to conduct new OR or to implement or scale up interventions in the short term. The most notable “new funding” that was not provided by USAID or other donors went to health centers in San Marcos. Part of the tripartite strategy (#20) was to work with the local government to get support for the health center. Health centers managed to get funding from the municipality to improve their appearance, for example for painting or signs. More importantly, the improvements to services made through re-engineering enabled the health centers to justify asking for more money from the MOH. While they had previously only been able to execute 13% of the health budget, they could now execute 80%. Funding for equipment and medicine also increased.

- **In 7 of the 22 studies, other donors provided new or expanded funding for program activities based on the results of the OR study (I-11).**

⁹ The norms are currently being modified, and numerous key informants said they would now include systematic offering of integrated services through use of the algorithm.

Funding from other donors was unusual, but it did occur. Georgetown has given additional funding to APROVIME (the organization that tested the necklace method in project #11) to do further work in natural methods. AVSC supported continued postabortion family planning in IGSS hospitals (#15). An informant from the Population Council said that AGROSALUD received some funding from a new donor (#12), but was not sure who the donor was. (Current AGROSALUD staff is not familiar enough with the OR project to clarify.)

Despite this handful of examples, the majority of OR studies did not attract funding from new donors. Thus, we have little evidence that OR studies prompt the original donor to invest further in the organization (beyond what was already “budgeted” long-term for the organization to receive) or that they draw new donors to that organization. Moreover, when new funds or a new donor are forthcoming, it is often difficult to determine whether the new resources are in fact attributable to the OR.

IV. DISCUSSION

This review of the OR projects in Guatemala offers an opportunity to reflect not only on the performance of the Population Council in a specific country, but also on the broader questions of what makes for successful outcomes in the conduct of research and in the utilization of results. The experience of this one country prompts us to ask: What *should* be the role of the Population Council (or similar agency providing technical assistance in OR) in assuring the successful completion of this type of project and subsequent changes in program management and policy? We also take advantage of this review to make further observations on the methodology that has been under development for the past two years to evaluate the process and impact of OR studies.

A. Strengths and limitations of Population Council performance in Guatemala

Strengths. The scores from Table 2 represent a crude measure of the strengths and weaknesses of Population Council performance in terms of the conduct of this set of studies (see final column that shows the proportion of projects scoring “3” on each item). Over three-quarters of the projects got the top score of 3 on the following items:

- Research was relevant to local program managers (1.00)
- Results were disseminated to key audiences (.91)
- TA was provided in a sound and collegial manner (.89)
- Implementing organization participated actively in the design of the study (.86)
- Implementing organization participated actively in the conduct of the study (.86)
- Study was completed without delays that would compromise validity (.86)
- Results were judged to be credible and valid (.82)
- Continuity in key personnel was maintained (.77)

On the remaining six process indicators, the proportion of projects obtaining the top score ranged from 0.59 to 0.68. In other words, on every measure of progress at least half the projects in this portfolio received the top score. These scores reflect very favorably on the conduct of this research.

The proportion of studies receiving the top score was considerably lower on the impact indicators, ranging from 0.00 (projects replicated in another country) to 0.82 (the activity tested under the intervention [and shown to be effective] was still observable 36 months later). However, as we will discuss below, the Population Council has far less influence and control over the actual utilization of results than the conduct of the research.

Limitations. One area for improvement in this set of studies concerns the objectives. Some projects had as many as 10 objectives. This effort to “be comprehensive” seemed to set projects up for falling short of achieving all of the stated objectives.

A second problem was “what constituted an objective.” In an OR study that tests an intervention, the objectives should clearly state the criteria to be used in judging the

effectiveness of the intervention (e.g., changes in knowledge, attitudes, or behavior among clients; KAP changes among the target population; increases in the number of visits or CYP at a service delivery facility). Thus, an appropriate objective would be “to test the relative effectiveness of strategy A versus strategy B in increasing contraceptive use in district X.” Studies often have multiple objectives (but not 10) to capture different types of outputs and outcomes: for example, an improvement in quality of care at the local clinics and an increase in contraceptive prevalence among the target population.

The studies in this portfolio often intermixed the results to be achieved among the target population with the activities to be completed (e.g., training to be carried out, IEC materials to be produced). The latter are important in planning one’s strategy to achieve the project’s objectives, but they are misplaced as a statement of objectives. (One exception relates to TA projects, in which it is appropriate to consider the completion of activities as a result in itself.)

Why do appropriate objectives matter? Project staff must maintain a clear focus on what they are trying to achieve. Specifically, they should be very clear on how the intervention will be evaluated. Listing the strategies to be used in achieving these objectives (e.g., training, production of IEC materials) provides further clarity to project staff as to what is expected. But the completion of those activities is not an end in itself.

B. Value of conducting OR in a politically hostile environment for family planning

When the Population Council began work in Guatemala in 1988, the social and political climate was very hostile toward family planning. Family planning services for indigenous women were rare, and where they did exist, numerous barriers made them virtually inaccessible. Before the Population Council could begin to concentrate on more specific aspects of reproductive health, they had to legitimize family planning as a health service, and considered OR to be the most effective way to accomplish this goal.

In such hostile environments, OR has several advantages over other approaches. Firstly, organizations are often willing to implement changes within the context of a research project; these otherwise controversial changes may be perceived as less threatening if they are “experimental.” Secondly, OR studies are conducted on a small scale, reducing the likelihood of opposition prior to and during the study. Positive results make scaling up interventions more acceptable. The Population Council chose research topics and counterparts that had the potential to improve the general reproductive health environment. According to the Deputy Director of INOPAL, “Our success . . . was that through OR we engaged many stakeholders in a constructive dialogue over a long period of time and thus helped legitimize family planning.”

With the USAID/Guatemala Buy-In in 1993 (followed soon afterward by the Cooperative Agreement), the Population Council opened a Guatemala office. They began to do more research, with a broader agenda that included several diagnostic studies and intervention studies involving men, traditional methods and CBDs, among others. The Population

Council worked primarily with NGOs and MOH districts because proposed studies were more easily accepted at these levels. OR projects continued to introduce or improve family planning services within the context of maternal/child health or primary care. Seeing the success of the Population Council studies, the MOH and other organizations became increasingly interested in collaborating with the Population Council. The series of algorithm studies, though carried out in limited areas, was conducted with the central level MOH and, according to a Population Council staff member, showed that family planning is “not a weapon of imperialism but health care.”

In a dramatic example of the change in atmosphere, and in the Population Council’s relationship with the government, the Population Council and Universidad de San Carlos have developed a distance learning program for senior doctors and nurses from the health districts. The course includes the algorithm for providing integrated services and other Population Council job aids not developed through OR. It is currently being tested in health areas, and will be expanded nationwide once the testing is satisfactorily completed.

Recently, service delivery organizations have become more enthusiastic about OR. Even though few have the capacity to do it on their own, implementing organization staff (including key decisionmakers) are choosing to be involved throughout the OR projects. The next logical step for the Population Council is to build the capacity of these organizations to conduct OR with minimal TA, discussed further below.

C. Appropriate level of technical assistance in OR projects

This review of the Guatemala experience raises the question of the appropriate level of technical assistance for agencies such as the Population Council in the conduct of OR projects. Guatemala is a country that might be classified as “mid-level” in terms of technical capacity for the conduct of applied research. It is far better off than many other developing countries (e.g., many of the African countries), yet it is less well developed than others. In such a situation, what amount of technical assistance is the right amount?

This review revealed that the Population Council played a significant role in the following areas:

- Identifying appropriate topics for OR (although the final selection generally went to the implementing organization);
- Preparing the proposal to meet “international standards”;
- Supervising the training of field personnel and quality control of data (although some implementing organizations were better equipped than others to do these tasks themselves);
- Conducting data analysis and interpretation;
- Identifying programmatic implications of the data and preparing recommendations (which counterparts would then review and modify); and
- Preparing the final report.

Should the TA agency be this involved in every stage of the process? On one hand, we applaud the strong technical assistance that the Population Council provided at all stages in the design and conduct of research, thus ensuring a product acceptable by international standards. On the other, we raise the issue: By “doing it all,” did the Population Council do all in its power to build technical capacity within these implementing organizations?¹⁰

On balance, our assessment is that the degree of technical assistance provided by the Population Council (or other technical assistance organizations for OR projects) must be tailored to the local environment. In most cases (APROFAM being the exception), the implementing organizations did not have the technical know-how to carry out research and they could not have participated in an OR study without strong TA from the Population Council. (One key informant had great praise for the patience exhibited by one of the early Population Council advisors in walking the organization through every step of the process over the course of numerous TA visits.) In such circumstances, the Population Council must take the lead if there is to even be a project. At the same time, we point out that the development of local technical capacity in different aspects of the OR skill set should be a by-product of these studies, and considerable work remains to be done on this score. The task is further complicated by the substantial rate of turnover within organizations, though employees often leave one organization only to resurface in another implementing agency.

D. Factors that influence the successful conduct of OR projects

The process indicators in Table 2 reflect the authors’ biases as to what contributes to the successful conduct of OR projects. Indeed, this set of projects collectively scored well on these items. During our interviews with key informants, other factors came to light.

OR projects tend to be successful:

➤ **When a charismatic leader is involved.**

A charismatic (technical) leader from either the research team or the implementing organization can contribute markedly to the success of a project. In our interviews for this review, key informants of all types consistently attributed the outcomes of a particular study to one individual who inspired those implementing the intervention. When asked about their working relationship with the Population Council, implementing agency staff generally spoke of one or two individuals with great respect and indicated that the study could not have been done without that person. Comments from the Population Council about their counterparts were similar. Describing the commitment of one NGO director, a Population Council informant said that in conducting OR “the people are the most important thing.”

¹⁰ Note: this statement overstates the reality and is included simply to raise the issue. Indeed, one can cite several projects in which APROFAM hired an external consultant as temporary staff and in fact this individual “did it all” (and went on to become a staff member of PC/Guatemala).

➤ **When the intervention is closely supervised and monitored.**

Staff from implementing agencies – not Population Council representatives – cited the importance of adequate monitoring and supervision of the intervention itself. In the third algorithm study, “Training in the Algorithm for Integrated MCH Services and Training in Counseling and Family Planning” (#19), the Population Council trained nurses and doctors who in turn trained other providers in use of the algorithm. At the outset some of the trained providers found that offering integrated services was difficult or time-consuming, and without supervision they might well have reverted to their customary way of providing services. However, with Population Council supervision and assistance and the passage of time, providers became more comfortable with the new process and were able to apply the algorithm more easily and efficiently.

In a second case, the community IMCI study (#22) required confirmation that promoters and nurse auxiliaries were diagnosing and treating conditions correctly, but low levels of education made provider records an unreliable data source. For example, promoters were able to count a child’s respiratory frequency accurately but sometimes made mistakes in writing it down. Direct observation and supportive supervision were therefore essential in ensuring that diagnoses and treatments were correct.

➤ **When the tools needed for the intervention are simple.**

The tools used in the intervention must be appropriate for the users: simple enough for local staff to learn and use regularly. The “algorithm” developed to provide integrated RH services in the MOH (#17) actually consisted of two parts: a one-page algorithm with seven questions to ask the client and services to offer according to her responses, and an accompanying manual detailing specific actions to take in carrying out each step. The algorithm itself was quite easy to follow, but the manual was more complicated. With many providers already hesitant to use any job aid in front of clients, many chose not to use one they had difficulty following. The Population Council conducted further OR studies (#18 and #19) to simplify the tools and the training procedure. Only one question was removed from the algorithm, but the manual was considerably revised, eliminating skipping between sections among other things. Providers found the new algorithm and manual much easier to use, and many are now comfortable enough with the questions and the steps to take to provide appropriate services that they can refer to the manual less frequently and still follow the protocols.

The Population Council and their partners developed the community IMCI tools (#22) for a population of providers and clients with little or no formal education, and found they were well accepted. Materials consisting primarily of graphics

helped overcome several potential problems. Rural promoters were able to understand the materials themselves, and were able to use them to educate parents on how to prevent their child from becoming ill in the future. There are many Mayan languages, but all linguistic groups could use the same materials (with the limited text in Spanish). And finally, the pictures reinforced the messages for both the promoters and their clients.

➤ **When the study design is “do-able.”**

The test of the acceptability and feasibility of using CBD promoters as a vehicle for the distribution of Depo-Provera (#4) was a good example of a very focused project that had clear objectives and a feasible methodology. The project worked well despite the low level of education in Mayan areas.

In contrast, several projects suffered from being too ambitious. The CBD re-engineering project (# 5) addressed a priority issue for APROFAM: how to restructure its CBD program to be more effective. However, it had three stages, with five interventions at the final stage. Despite an enormous amount of hard work, the team was not able to complete all five interventions. The complexity of the plan of analysis (that broke down the results by salaried versus volunteer workers, men versus women, new staff versus old staff) made it difficult to arrive at concrete conclusions. One Population Council representative commented that it would have been better to break the study into several more manageable components for two reasons: (1) feasibility of conducting the entire study, and (2) attribution of change to a specific intervention.

E. Factors that influence the utilization of OR results

The very purpose of OR is to provide results that will be used to guide improvements in service delivery. In this section we describe factors that influenced the utilization of results in the Guatemala context.

The results of OR studies get utilized:

➤ **When the intervention is a good match for the implementing agency.**

Certain interventions tested were an excellent match for the institutional culture of the organization; others were not. This factor had a clear influence on the utilization of results in a number of the projects.

One of the best “fits” was the testing of the efficacy and acceptability of the necklace (a device to facilitate the use of the rhythm method) among NGOs working in Mayan areas (#11). These NGOs were interested in birth spacing and wanted a method that would be culturally acceptable in Mayan communities. The

necklace method had considerable promise since it is “natural” and does not cause side effects associated with hormonal methods. The OR project demonstrated a high level of continuation at 12 months, indicating that Mayan couples could use the method effectively. As a result, four of the five NGOs that tested the method continued to promote its use after the project, and several other organizations (including the MOH) have since picked up on it. The characteristics of the method fit well with the NGOs’ desire to promote a method acceptable to its target population.

The community IMCI project (#22) also fit the needs and experience of NGO health promoters and rural nurse auxiliaries. The providers see many gravely ill children; to the extent they can treat and cure them, they gain the respect of the community. This respect and the increased self-confidence of the providers in turn motivates them to give even better services and establishes the basis of trust for offering potentially controversial services such as reproductive health.

The clinic-based FP/RH algorithm (#17-19) was also a good match for the institutional culture of the organization testing it, the Ministry of Health. The MOH is a large health system and strives to offer standardized care according to established protocols at all service delivery points. By incorporating an algorithm with an accompanying handbook explaining the necessary steps in greater detail, the MOH seeks to ensure that providers in all centers offer the same health services in the same way to women with a specific need. While flexibility is desirable in other interventions, here the implementing organization sought consistency.

The case of AGES drives home this point of the importance of “good fit” between the intervention and the organization. AGES conducted two successful studies (#7 and #8) involving health education strategies to reach indigenous populations. They felt comfortable in applying these strategies and carried them out with minimal problems. However, in a third study AGES, under some pressure from the INOPAL Director, included a contraceptive service delivery component. Distributing contraception was not one of AGES’ competitive advantages; in fact, AGES did not want any of the “bad press” that APROFAM was getting for doing this type of work. When problems arose at the field level AGES staff, inexperienced in dealing with such situations, retreated from this aspect of the intervention. Service delivery, while an understandable goal, is not part of their mission, and the project floundered when they attempted to integrate contraceptive services into the project design.

An IGSS study (#16) also underscores this point. The OR project attempted to improve rural perinatal care by training TBAs, but IGSS’ institutional strength is in clinical service delivery with clinically trained personnel. They were therefore not willing to invest in training all affiliated TBAs when they could spend the money in hospitals that delivered far more births than all the TBAs combined, even though the TBAs reached different groups.

➤ **When the intervention yields immediate, observable improvements.**

Organizations are also more likely to utilize research findings when an intervention yields immediate, observable improvements. The re-engineering activity in MOH centers in San Marcos (#21) took only a few weeks but resulted in drastic changes to clinic appearance and atmosphere. Both providers and clients noticed the new paint on the walls, new signs and cleaner facilities, as well as the shorter waiting time. Nurses were better utilized so they experienced greater job satisfaction and the clinic was able to attend all patients arriving in a given day when previously many had been turned away. Auxiliary nurses participating in the continuing education course (#20) had greater capacity to attend and counsel clients, or understand the doctor's or nurse's diagnosis and treatment in a clinic setting. In contrast, resistance to interventions has been strongest when benefits are less obvious. Doctors who were trained but did not use the algorithm (#17-19) said that it took too much time and that they didn't notice any negative consequences of not offering women services they might accept but have never had.

➤ **When the intervention increases provider motivation.**

Providers feel motivated when they are able to offer clients a better quality of care. Several providers mentioned that they were willing to do more work than they had in the past because they felt more competent and their patients were more satisfied. They referred to their experience with the Population Council as "teamwork" and said they wanted to continue the intervention and were more open to changes or new interventions than they had been before the OR study.

➤ **When the intervention has a committed advocate.**

Much as the "charismatic leader" contributes to a quality OR study, a "champion" or advocate for the study who remains committed after it ends enhances the likelihood that the intervention will be scaled up or replicated and institutionalized. One of the top-level officials in the Reproductive Health Unit of the Ministry of Public Health was an advocate for continuing to test and improve the algorithm, and it eventually became a standard protocol for MOH hospitals, health centers and health posts (#17 – 19). A locally hired Population Council representative remained very involved in the scaling up and replication of the re-engineering component in San Marcos and Sololá (#21).

An extension of the individual advocate is a committed organization. At both the administrative and the service delivery levels, the MOH believed that initial problems with the algorithm could be solved, and they invested several years and

considerable human and financial resources in developing and implementing a satisfactory algorithm. Had their commitment dwindled at the end of the first study, the algorithm might never have been developed into a useful tool and indeed could have been abandoned.

The commitment of the MOH to using OR to improve services did not end with the algorithm studies. After seeing the benefits of an OR intervention, providers and decision-makers were more willing to participate in subsequent studies. Positive experiences with one OR study often led to more openness to future interventions in NGOs as well. In addition to participating in the IMCI study (#22), both CDRO and PIES del Occidente trained their clinical staff to provide integrated care through the RH algorithm. PIES del Occidente now requires that new doctors hired be trained and experienced in the algorithm prior to working at PIES clinics.

- When technical assistance continues beyond the end of the project.

Implementing organizations may be more likely to integrate OR findings and scale them up within the organization if they receive some technical assistance and monitoring throughout the transition process. A representative from an NGO that only recently began offering reproductive health services said, “Things improved when the [Population Council] Xela office opened.” A nurse from the health center in San Marcos said, “We think we are doing things right, but we need feedback to be certain.”

- **When the timing is right.**

A major factor in all OR studies is the timing of the intervention. Indeed, it may be difficult to distinguish the impact of an OR study from an idea whose time has come. Although the quality of the study is important, other factors may be responsible for scaling up or replication of the intervention in question. For example, this portfolio of projects contains several studies in which Depo-Provera was introduced in a particular service environment and met with unprecedented demand. APROFAM CBDs were trained to provide Depo as part of study #4; MOH doctors and nurses, and later IGSS doctors and nurses, received training in Depo as part of studies #18 and #16.

Can these different OR studies claim credit for the fact that Depo-Provera is currently the most widely sought method among new users? Without a doubt, the OR projects contributed to further increasing awareness of the method and improving access to quality services for its provision. However, one could also argue that Depo, already a popular method elsewhere in Latin America, was poised to become an important method in Guatemala. It is simple to use and highly effective; it can be used without the knowledge and cooperation of the

partner; and it appeals to the Guatemalan affinity for injections as the most effective form of medication.

F. The value of evaluating diagnostic studies with this methodology

In previous case studies using this evaluation methodology, evaluators have chosen to include only intervention and evaluative studies, and to exclude diagnostic studies.¹¹ Although the original scope of work for this review excluded diagnostic studies, the Population Council requested that they be included. Implicit in this request was the belief that diagnostic studies **should** “lead to something”; otherwise, what is the value of doing them? Thus, in this review we examined whether the two diagnostic studies¹² led to new interventions or changes in service delivery. These studies were:

- Baseline Study of Reproductive Health Beliefs and Attitudes of Males in Four Health Districts in the Department of El Quiché (#2); and
- Study of Cognition and Speech Patterns of Urban and Rural Indigenous Community Residents about Reproductive Health in the Department of Quetzaltenango (#13).

Of these two diagnostic studies, one led to an intervention. The baseline survey for reproductive health activities among men in El Quiché (#2) served to inform the intervention that was tested immediately afterwards (#3). Although the actual intervention was one of the least successful in this portfolio of studies, the timing and use of the diagnostic study were highly appropriate. In this case, one might argue that the two studies did not need to be separate; rather, the diagnostic component should have been (and was) the logical first phase of the larger project. However, there was value in making this activity into two separate projects. Had the diagnostic study provided results that suggested **against** implementing an intervention, one would have been spared the effort and expense of the implementation phase.

The second diagnostic study may have informed the work of the Population Council in Guatemala, but it was not clearly linked with an intervention. In 1994 the Population Council commissioned the Universidad del Valle to conduct an anthropologic study on cognition and speech patterns regarding reproductive health (#13) to inform the design of subsequent reproductive health projects for rural Mayans. The research showed, among other things, the impracticalities of condom use and low levels of knowledge about reproductive physiology and pregnancy, which helped explain attitudes toward contraception. However, there was no clear dissemination strategy for these study results and due to a change in Population Council leadership in August 1996 and a shift in

¹¹ Many of the indicators do not lend themselves to diagnostic studies, and it was decided that this methodology was not appropriate for these studies.

¹² Several other studies included diagnostic components, but we classified them as “demonstration/evaluative” or “intervention” if they also involved some aspect of actual service delivery or a related intervention (e.g., sex education in Mayan communities).

priorities, the results did not reach the intended users. Although the findings were summarized in two Population Council publications,¹³ and have the potential to benefit the recent work of NGOs, the results remain underutilized by any measure.

Our conclusions from examining these diagnostic studies are as follows:

- (1) This methodology can be used in evaluating diagnostic studies, although a number of the indicators for impact are by definition “not applicable.”
- (2) Studies that deal with “new areas” are often mislabeled as “diagnostic” when in fact they are demonstration/evaluative. To avoid missing such cases, evaluators should assess “diagnostic” studies as well.
- (3) Diagnostic studies should contribute to interventions, and thus they should be included in future evaluations of this type.

G. Reflections on the methodology

This review brought up a number of issues related to the application of the methodology. Several issues are presented below while those related to dissemination are included in Appendix D, which presents the results of pretesting three new questions on dissemination.

➤ Assessing the “whole” through the lens of the individual studies

This evaluation was based on a systematic review of the 22 projects that comprised the portfolio of OR conducted in Guatemala with assistance from the Population Council from 1988-2000. We interviewed key informants about the details of each specific study, and we compared their responses to the findings published in the written reports. However, the methodology used a “case-by-case” approach. We did give key informants the opportunity to explain contextual factors that facilitated or hindered the conduct of the research and the utilization of results, but most discussion still focused on individual projects. Although we attempted to look at the projects in the context of the overall political and social context of reproductive health interventions in Guatemala during this period, the line of questioning was not designed to capture the “bigger picture” and we may not have done it justice in this review.

In short, one can criticize this methodology for focusing on the “trees,” and losing sight of the “forest.” In future applications of the methodology, the evaluators should address how to overcome or minimize this limitation.

¹³ Population Council/Guatemala. 1998. *Findings and Lessons Learned In Delivery of Reproductive Health Care to the Rural Mayan Population of Guatemala from Operations Research and Diagnostic Studies 1994-1997*. New York: Population Council; and Enge, Kjell. 1998. *Salud y reproducción: qué piensan, sienten y desean los mayas*. Documentos de Trabajo, núm. 20, 1998. Mexico: INOPAL III.

➤ Recall

As in the previous six case studies, we found that key informants had more difficulty answering questions on projects completed long ago than those completed more recently. Some of the studies in this review were completed over ten years ago, and even researchers had some trouble remembering what had happened in the study itself, or had lost contact with the implementing organization and could not adequately respond with respect to the impact indicators. In these situations, key informants either had to guess, refer to the final report, or not answer. Using the final report to answer questions on the project reduces the value of interviewing a key informant, because one of the main purposes of the interview is to learn more about topics that are *not* in the report.

Recall was particularly hazy in relation to dissemination activities, levels of participation of both the Population Council and the implementing organization in the design and conduct of the study, and occasionally even the study findings, all of which are important factors for enhancing the likelihood of utilization.

In this review we were able to get some idea of the process and impact of all studies, often by consulting additional sources, but the data would have been richer if all projects were fresh in the minds of the individuals interviewed. Our experience with this Guatemala review supports the recently established approach to evaluating FRONTIERS projects, which consists of a process assessment at the project end and an impact assessment three years later (when presumably key informants will have some recall of the experience of each study).

➤ Variety of informants

In some cases a single key informant and the final report provided sufficient data to answer all of the indicators on the data collection form (see Appendix C). However, the team found it necessary to interview several key informants per study, because people tended to remember different things or perceive things differently. The FRONTIERS Evaluation Guidelines¹⁴ recommend interviewing key informants from three main categories: 1) researchers, 2) program managers, and 3) donor agency staff, “ideally one from each category.” Experience in this review suggests that the *minimum* should be one from each category, including one Population Council researcher as well as his or her implementing agency counterpart. Without this range of experience, it is difficult for key informants to provide information on the full range of indicators (e.g., collaboration and participation, credibility and validity of study findings, feasibility, availability of research results and impact on the original implementing agency and other organizations). Indeed, we found that interviews with two different individuals within the same organization (either at the service delivery or research level) could yield either complementary or conflicting information.

¹⁴ FRONTIERS/Tulane University. *Evaluating Operations Research Utilization: Guidelines for Assessing Process and Impact*. Washington DC: Frontiers in Reproductive Health, November 2000.

➤ **Impact assessment by Project Monitors**

Currently, evaluation under FRONTIERS consists of a Project Monitor completing the Process and Impact Assessment Forms at the appropriate times, followed by a verification visit by FRONTIERS/Tulane staff to a subset of projects. Interviews with key informants may be used as needed, but are not required based on the Project Monitor's presumed knowledge of what has happened in terms of changes in service delivery and policy after the study was completed (i.e., "impact"). This review showed that the Population Council Monitor or PI often knows what has happened only to the extent of his or her involvement. Many may continue to be aware of new activities related to the study, but usually the implementing agency and the end users (if these are different) know better what has happened and why. If they have made modifications to the intervention adopted, they may not inform the Population Council. Project Monitors will likely know what parts of the intervention were officially adopted, expanded or replicated, but will probably not routinely follow up on these actions with the end users to determine the extent of institutionalization or program level reactions to the changes. In the intervening three years from the project end to the impact assessment, a Project Monitor will be involved in a variety of new studies, possibly with different organizations; thus, he/she may not be able monitor completed projects very closely. In other words, Project Monitors could conduct an impact assessment based on their own knowledge, but to get in-depth information on the context and nature of the impacts, they should include key informant interviews as part of the evaluation process.

➤ **Issues with specific questions**

In addition to the above reflections on the methodology as a whole, we found that some specific indicators posed a challenge in this review. Four indicators are listed below, along with a description of the problem and a proposed modification that might resolve the problem.

Indicator P-8: The implementing agency judged that the technical assistance was useful, methodologically sound, and provided in a collegial manner. Responses to this indicator were very nearly all extremely positive, even though the interviewers were not Population Council employees, and PC/Guatemala staff were not present. This apparent consistency suggests the possibility of a courtesy bias on the part of the implementing agency staff, many of whom continue to work with the Population Council on other projects. The enthusiasm of the responses, on the other hand, as well as references to specific experiences, leads us to believe that most of the responses are genuine and do not reflect a generalized bias. Nevertheless, an outside evaluator (not a Population Council staff member) must ask this question, and responses must be interpreted with caution. Since a Project Monitor should not be asking the implementing agency this question, we will need to either only ask it in verification visits by Tulane staff, or develop a supplementary form to be returned directly to the Washington, DC office to provide

respondents with greater confidentiality. Without these measures, few organizations can be expected to be candid in their assessment of technical assistance or even active participation or collaboration with the Population Council.

Indicator P-9: The study design was methodologically sound. We decided to use a fairly strict interpretation of “methodologically sound” in this review. A number of the studies produced seemingly valid results but did not use experimental or quasi-experimental designs typically associated with OR. Designs such as pre and post-test with no comparison group, or post-test only with or without a control group kept the studies simple and feasible, yet these designs might not meet international criteria for “rigor.” In instances where we felt studies could have been more “scientific” in their designs but nevertheless produced credible and defensible results, we have not given the studies the top score of “3.” In future applications of the methodology, it will be important to ensure that scoring criteria are consistent.

Indicators I-10 and I-11: The original donor funded new or expanded program activities based on the results of the OR study; and Other donors provided new or expanded funding based on the results of the OR study. We found the term “new donor” difficult to define. Many reproductive health programs in Guatemala, as in the rest of the world, are funded by USAID but have different objectives and activities. Calidad is the most evident of this type of “new funding” in Guatemala. Are funds provided by another USAID cooperating agency from the same or “different” donors? On the one hand, a single donor, USAID, funds Calidad and the implementing agencies, but on the other hand, each program operates independently and decides to allocate funds based on its own priorities and through its own decisionmaking process. In fact, only very rarely did any non-USAID CA provide new funds. One option is to reword these indicators to make them more precise, while another is to include all direct or indirect USAID contributions as the original donor, with the evaluator specifying the exact source of the funds.

Table 1.
OR Studies in Guatemala by Type and Substantive Focus

Topic of Study	Type of Study					Total
	Technical Assistance	Diagnostic	Demonstration/ Evaluative	Intervention	Dissemination/ Utilization	
Acceptability		2				2
Access			2	1		3
Capacity Building				2		2
CBD workers				3		3
Community promotion			1			1
Constellation of services			1	1		2
Institutionalization					1	1
Integration			1	2	3	6
Job instruments				1		1
KAP			2			2
Men		1		1		2
Monitoring and supervision				1		1
PAC			1			1
Service organization			2			2
Sustainability		2				2
Technical competence	2		1	1		4
TOTAL	2	5	11	13	4	35

Table 2.
Summary of Key Findings from the 22 OR Studies and Subsequent Changes in Service Delivery or Policy

Study	Type of OR Study	Main Finding of the Study	Organization Acted on Results (I-2)	Evidence 36 Months Later (I-3)
#1. On-site Training: CBD Promoters in Indigenous Areas	Intervention	Phased, competency-based supervision improves distributor knowledge.	APROFAM switched from simply resupplying promoters and collecting money to a system of “ <i>supervisión capacitante</i> ” and new scheduling of supervision.	This system remained in place thereafter.
#2. Reproductive Health Beliefs and Attitudes of Males in El Quiché	Diagnostic	Men had very low knowledge of family planning but they were interested in learning about birth spacing.	APROFAM planned and executed a project on “Appropriate Health Education Strategies for Men in 4 Health Districts in el Quiché.” (see next project)	N/A
#3. Appropriate Health Education Strategies for Men in El Quiché	Intervention	Recruiting men in El Quiché to attend health education talks didn’t work; instead, they were willing to attend recreational and athletic events. Contraceptive prevalence was higher in experimental than comparison communities.	No immediate follow-up	APROFAM has recently initiated new activities directed to men, but with no apparent link to the original study.

Study	Type of OR Study	Main Finding of the Study	Organization Acted on Results (I-2)	Evidence 36 Months Later (I-3)
#4. Injectable Contraceptives Provided by Volunteer Community Promoters	Intervention	Trained community personnel can effectively and acceptably provide Depo-Provera to Mayan communities.		APROFAM continues to authorize selected CBD promoters to provide Depo at the community level.
#5. Re-engineering CBD Program of APROFAM	Demonstration/Evaluative	Identified profile of “ideal CBD worker” from perspective of Mayan women. Training promoters in broader reproductive health topics increased sales.	APROFAM developed new criteria for selection of promoters.	
#6. Improving Client Referrals to APROFAM Clinics	Intervention	The strategy to bring promoters to be trained in the clinic was more effective in increasing referrals to APROFAM clinics than the usual strategy of training by <i>educadores</i> , but was more expensive.	Intervention not continued due to cost.	N/A
#7. Interest among Indigenous Populations in Learning about Family Planning	Demonstration/Evaluative	Women in Mayan communities were interested in learning more about reproduction and birth spacing. It was acceptable to provide health education talks in Mayan communities.	AGES continued to develop educational programs for Mayans.	This work continued through the 1990s.

Study	Type of OR Study	Main Finding of the Study	Organization Acted on Results (I-2)	Evidence 36 Months Later (I-3)
#8. Reproductive Health Education in Indigenous Areas through Bilingual Teachers	Demonstration/Evaluative	Bilingual teachers can be motivated to effectively teach reproductive health subjects in Mayan communities at a cost of \$2.50/student.	AGES continued its work with sex education in Mayan communities, with additional support from other donors.	AGES remained active in this area three years later (though recently had funding cuts from the government).
#9. Access to Reproductive Health Services and Education in Indigenous Communities	Intervention	AGES was strong in conducting educational activities, but the service component was not successful: few teachers distributed contraceptives, segmentation meetings didn't work, and two other strategies were abandoned.	AGES remained very reticent to work in the delivery of contraceptive services.	N/A
#10. Providers and Reproductive Health Service Delivery Strategies in 2 Conservative Indigenous Communities, Lake Atitlán	Demonstration/Evaluative	Technical assistance helped increase knowledge and skills of workers in Rxiin Tnamet for FP/RH service delivery in Mayan communities; community workers performed better than clinical staff.	Rxiin Tnamet put into practice training and suggestions, improved its MIS system for low literate promoters, and strengthened service delivery in the community.	Rxiin Tnamet remains a model for service delivery in Mayan areas.
#11. Testing the "Blanket Rule" Rhythm Method among Indigenous Guatemalans	Intervention	Mayan couples could effectively use the "necklace method" to prevent pregnancy, and it was highly acceptable in the local culture.	Four of five NGOs continued to promote the method as part of their health services.	These NGOs, as well as the MOH and others, continue to promote the necklace method.

Study	Type of OR Study	Main Finding of the Study	Organization Acted on Results (I-2)	Evidence 36 Months Later (I-3)
#12. Self-Financed Incorporation of Family Planning in Rural Fincas	Demonstration/Evaluative	Reproductive health services are in demand on fincas and can be provided by promoters in health posts and referrals to APROFAM.	Reproductive health services, particularly counseling, continued to be offered at finca health posts.	Services still offered 9 years after study end.
#13. Cognition and Speech Patterns about Reproductive Health of Urban and Rural Indigenous Community Residents	Diagnostic	Reproductive health programs based on Western concepts of reproductive health and knowledge are unlikely to succeed; programs should be planned with knowledge of the culture and lifestyle of indigenous groups.	None (no intervention)	N/A
#14. Collaboration between Two NGOs, ATI and APROFAM, in Delivery of Family Planning Services	Intervention (only diagnostic phase implemented)	Information about barriers to women attending reproductive health meetings and the characteristics of their ideal promoter.	None (no intervention)	N/A
#15. Quality of Services for Women Who Had an Abortion	Demonstration/Evaluative	Many women not using family planning will use a method if services are more convenient (in particular if they can get a method right away).	Postpartum/postabortion family planning services were continued in OB-GYN hospital and expanded to all hospitals in the IGSS system.	Changes still in effect in first hospital after 3 years; changes in additional hospitals are more recent but still in effect.

Study	Type of OR Study	Main Finding of the Study	Organization Acted on Results (I-2)	Evidence 36 Months Later (I-3)
#16. Integrated Obstetric, Family Planning and STD Training for TBAs	Intervention	Self-esteem should be incorporated into training, especially for community workers. Supportive supervision is most effective for reinforcing training/knowledge.	Supervision system was maintained and used in other IGSS services. TBA training was continued on a very limited scale, but was not cost-effective enough to expand.	Supervision system still in use.
#17. Systematic Offering of Family Planning/ Reproductive Health Services in Guatemala	Intervention	The algorithm is a potentially useful job aid for screening clients' reproductive needs, but can only be successful with greater commitment of area and district chiefs.	Further OR studies were conducted to test a modified algorithm and new training strategies.	New model of integrated services for women still in place after 4 years, but has been modified.
#18. Institutionalization of Systematic Offering of Integrated Reproductive Health Services in Quetzaltenango	Demonstration/ Evaluative	Training all medical and non-medical staff in their own work environment and giving providers immediate feedback on use of the algorithm leads to a greater degree of institutionalization than centralized training.	Scaling up has continued using a new training approach. MOH plans to include algorithm in norms for all health centers and posts.	Study completed in 1999. Changes are still in place.

Study	Type of OR Study	Main Finding of the Study	Organization Acted on Results (I-2)	Evidence 36 Months Later (I-3)
#19. Evaluating Training in Algorithm for Integrated MCH Services and Training in Counseling and Family Planning	Intervention	Offering services systematically through a standard set of questions asked of all women regardless of reason for visit improves quality of care and client satisfaction (more than family planning training alone).	Algorithm continued to be scaled up, and a new training strategy was developed to promote institutionalization.	Application of algorithm was scaled up, and maintained in original health centers. Study was completed in 1999 and changes are still in place.
#20. Continuing Education System in Reproductive Health for Auxiliary Nurses	Demonstration/ Evaluative	Distance education can improve the knowledge and skills of auxiliary nurses.	Distance education course is offered to new auxiliary nurses entering the system, and the Nursing School is working on a final module with JHPIEGO.	Study completed in 1999. Would like to scale up after Module 6 completed but don't know if they can find funding.
#21. Testing a Tripartite Strategy in San Marcos	Demonstration/ Evaluative	When they feel they have the ability to make changes and can see the benefits, health center personnel are willing to work harder to provide quality care, and satisfaction of both clients and providers increases.	Sololá Health Area adopted intervention and more health centers in San Marcos carried out re-engineering.	In study intervention sites, new model of attention is still in place, with periodic evaluations and improvements. Other health centers adopted the intervention since 1999.
#22. Algorithm for IMCI at Community Level	Intervention	Community workers with low education level can syndromically diagnose and treat life-threatening childhood illnesses using algorithm and IEC materials.	Non-clinical health workers from MOH as well as NGOs began using the IMCI tools to treat sick children.	Study ended in 2000. NGOs and MOH are continuing to expand implementation.

Appendix 1. Hospitals and maternity services available in Guatemala, 2001

Region	Type of hospital					
	Regional	Area	District	Municipal Maternity	IGSS Hospital	IGSS Medical office
Nor-westl	Coatepeque Quetzaltenan go	Chimaltenango Huehuetenango Sacatepéquez San Marcos Sololá Totonicapán	Malacatán San Pedro Necta	San Carlos Sija		San Lucas Tolimán Sololá Totonicapán
Sur-occidental		Escuintla Jutiapa Retalhuleu Santa Rosa Suchitepequez	Asunción Mita Atescatempa San Rafael Tiquisate		Escuintla Mazatenango Patulul Santa Lucia Cotzimalguapa Tiquisate	La Gomera
Centro-oriental	General San Juan de Dios Roosevelt	Chiquimula El Progreso Jalapa Zacapa	Cabañas Gualán Amatitlán Mataquescuintla	C/S Guatemala Norte C/S Guatemala Sur	Hospital de Gineco-Obstetricia Juan José Arevalo	Chiquimula Jalapa Zacapa
Nor-oriental		Alta Verapaz Baja Verapaz Izabal Poptún Quiché San Benito Petén Sayaxché	Cahabón Carchá El Estor Fray Bartolomé Ixcán Joyabaj La Tinta Livingston Melchor de Mencos Morales Nebaj San Cristobal Senahú Tucurú Uspantán			Salama Sta. Cruz del Quiche

ANNEX 4:

RESULTS, BENCHMARKS AND INDICATORS FOR ELEMENT 1: OPERATIONS RESEARCH, 1997-2001

Results, Benchmarks and Indicators for Element 1: Operations Research, 1997-2001

Within the USAID/G-CAP Results Framework, OR activities of The Population Council apply to Intermediate Result 1: the increase of rural families using quality maternal and child health services. The Lower Level Result that applies to OR activities is LLR1.4: the adoption of innovative approaches to improve quality, coverage and access of services.

During the length of this project, specific yearly benchmarks, indicators, results and data sources were agreed upon with USAID/G-CAP. The following tables describe these expected results, indicators / benchmarks, targets and achievements made during each year from 1997 to 2001. During the length of this project the reporting procedures were discussed and agreed upon between the Population Council and the USAID/G-CAP Mission. During the initial years of the Cooperative Agreement, no specific yearly targets were set for OR activities, and yearly reports included only previous' years achievements. Starting in 1999, specific project targets were included in the yearly work plan, and monitoring and supervision of these projects was conducted based on such goals. The following tables reflect changes in the reporting procedures over time.

Table 1. 1997 Results, Indicators and Achievements

1997 Expected Results	Indicators and Benchmarks	Achievements (1997)
1. Innovative approaches adopted by APROFAM to expand coverage through the provision of injectable contraceptives by volunteer health promoters (PVS) and educators.	Ind. 1a. Proportion of APROFAM PVS and educators providing injectable contraceptives.	Proportion of female Mayan PVS providing Depo Provera by the end of 1997ñ: 23.5% Female educators providing Depo Provera: 58.2%.
	Ind. 1b. Number of new users (or CYP) of injectables.	CYP for Depo Provera: 5,198.25

3. Innovative approaches to improve quality of care through improved selection and training of community service providers adopted throughout Rural Development Program (RDP)	Ind. 3a. Number of new educators and PVS selected according to current (OR) criteria.	10 new educators and 328 new PVS were selected using a new process involving increased community participation.
4. Innovative approaches adopted to determine whether community health personnel can make quality referrals for obstetric care and family planning.	Benchmark 4. Quality and increase of referrals by trained community health personnel measured.	New OR project developed with APROFAM focusing on referral system.
8. NGOs institutionalize new Management Information System (MIS) for RDP.	Benchmark 8. Monthly service statistics collected and analyzed using improved, simplified system.	New MIS fully institutionalized in APROFAM's RDP by mid-1997.

Table 2. 1998 Results, Indicators and Achievements

1998 Expected Results	Indicators and Benchmarks	Achievements (1998)
1. Innovative approaches tested for improving health center services to expand coverage and improved quality of care.	New model for clinical service delivery in Concepción Tutuapa developed and tested by PC and San Marcos <i>Jefetura de Area</i>	Redesign of service delivery model completed. Service statistics indicated increased service use. Final assessment of quality of care and patient flow conducted in 1999.
2. Innovative approaches tested to determine whether community volunteers can increase the use of health posts and RH clinics.	Ind. 2a. Number of referrals during test period and increase in use of RH services in Tacaná district health posts. Ind. 2b. Number of clinics referrals by APROFAM promoters (increase over baseline figures).	Ind 2a. Intervention completed successfully. Final assessment completed in 1999. Ind 2b. Evaluation demonstrated that promoters can be successfully trained to make referrals, which increased by 238% with in-clinic training. A curriculum and training/reference manual were developed to facilitate replication in other parts of the country.
3. Innovative strategies being tested for continuing education of auxiliary nurses in the highlands.	Ind. 3. Number of auxiliary nurses electing to participate in continuing education; number of auxiliary nurses who successfully complete training by module.	Ind 3. Three modules developed and circulated to auxiliary nurses in 6 health areas. A total of 693 auxiliary nurses and their supervisors received the first module, 713 the second and 689 the third. 311 auxiliaries from 4 reporting health areas successfully passed an exam on the first module, and 58 from Sololá passed an exam on the second.
4. Innovative approaches tested to expand education in birth spacing and increase practice among Mayan couples.	Benchmark 4a. PC and APROVIME tested the effectiveness and acceptability of education in the calendar rhythm method with Mayan couples. Benchmark 4b. LLLG of Guatemala tested the effectiveness of mothers'	Acceptability of the rhythm as a contraceptive method was demonstrated by the rapid recruitment of couples interested in using the method. Method discontinuation rates were low and failure rates were similar to international standards. Study corresponding to Benchmark 4b completed in 1998. Results showed a significant increase in knowledge of

	<p>groups in education on optimal infant feeding and lactational amenorea method (LAM), as well as in making service referrals.</p> <p>Benchmark 4c. Bilingual teachers educate couples about reproductive health and the use of health services.</p> <p>Benchmark 4d. PC and APROFAM develop strategies to increase PVS' home visits and community education.</p>	<p>optimal feeding and LAM, but few changes in practice, perhaps due to the short life of the project. Few referrals were made for clinic services.</p> <p>Study corresponding to Benchmark 4c only partially implemented; activities were not continued after the study.</p> <p>Study for Benchmark 4d postponed until 1999.</p>
5. Strategies expanded for improving RH service providers' activities.	Benchmark 5. Algorithm and guides distributed nationally; trainers and service providers trained.	A total of 4,500 algorithms and guides were printed to be distributed by the MCH Program and PC. Well over half were distributed, and distribution continued throughout training programs. Over 1,500 MSPAS health personnel were trained or provided with orientation in the use of the algorithm.

Table 3. 1999 Results, Indicators and Achievements

LOP Expected Results	Performance Indicators	Definition and unit of measurement	Data source and collection method	Frequency of data collection	Baseline	Achievements
1. Expanded use of birth spacing methods and basic medicines	Increase in new family planning (FP) users in Sololá	New contraceptive users; methods distributed in MSPAS in Sololá	SIGSAs (<i>Sistema Geográfico Nacional</i>)	Annual	679 new users [pill, condom, injectable, intra-uterine device (IUD)] in first 6 months of 1999	2,500 new users
2. New FP options available	Norplant provided in Guatemala	Institutions state that they are offering Norplant	Observation or service statistics	Annual	0	2 institutions offer Norplant
	Emergency contraception (EC) services available	Institutions state they are offering emergency contraception	Observation or service statistics	Annual	0	1 institution offers EC information
3. APROFAM promoters make home visits	APROFAM reports home visits by promoters		RDP service statistics	Annual	0 in 1999	At least 25% of promoters make home visits in priority departments
4. Expanded provision of	Health agencies provide instruction	Institutions trained to provide/train in	NGO and APROVIME	Annual	5 NGOs at the beginning of	At least 15 NGOs by end of

natural family planning (NFP) instruction	in necklace NFP method	the necklace method	reports		1999	1999
5. Strategies tested for improved RH care provider performance	New training model(s) demonstrated	Reproductive healthcare personnel trained in contraceptive technology	Council surveys and training reports	End of 2000	NA	At least 1500 providers trained directly in at least 2 strategies

Table 4. 2000 Results, Indicators and Achievements

LOP Expected Results	Performance Indicators	Definition and unit of measurement	Data source and collection method	Frequency of data collection	Baseline	2000	
						Target 12/00	Actual 12/00
1. Expanded use of birth spacing methods and basic medicines	Increase in new FP users in Sololá	New users attended by the MSPAS in Sololá	SIGSAs	Annual	679 new users (pill, condom, injectable, IUD) in first 6 months 1999	1,700 new users	2,725 new users
2. New FP options available	Norplant is provided in Guatemala	Institutions state they are offering Norplant	Observation or service statistics	Annual	0	2000 & 2001 - 2 institutions offer Norplant	IGSS & APROFAM offer method
	EC services are available	Institutions state they are offering EC	Observation or service statistics	Annual	0	New OR study developed	Training of 50 Human Rights Attorney social workers on EC
3. APROFAM promoters make home visits for new users	APROFAM reports home visits by promoters		RDP service statistics	Annual	1999 baseline data to be collected early 2000	Study completed	Study completed. 2,017 home visits conducted in 2000
4. Expanded provision of NFP instruction	Health agencies provide instruction in necklace NFP method	Institutions state they provide information/counseling on the method or send user reports	NGO and APROVIM E reports	Annual	5 NGOs: 1999	At least 10 NGOs trained by the end of 2000	40 NGOs trained

5. Strategies tested for improving RH care provider performance	New training model(s) demonstrated	RH care personnel trained on contraceptive technology	PC surveys and training reports	At end of 2000	NA	1500 RH personnel trained	852 trainers and approximately 4,000 providers trained
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Table 5. 2001 Results, Indicators and Achievements

LOP Expected Results	Performance Indicators	Definition and unit of measurement	Data source and collection method	Frequency of data collection	Baseline	2001	
						Target 2001	Status Oct 2001
1. Expanded use of birth spacing methods and basic medicines	Increase in new FP users in Sololá	New users attended by the MSPAS in Sololá	SIGSAs	Annual	679 new users (pill, condom, injectable, IUD) in first 6 months 1999	2,500 new users for 2001	3,120 new users during Jan-Oct 2001
	Situational analysis of post-obstetric event (POE) contraceptive services in public hospitals	Situation analysis (SA) of POE services	Hospital records and interviews with clients and service providers	One assessment during 2001	0	Complete SA in 10 hospitals	Complete SA in 17 hospitals
2. New FP options available	Norplant is provided in Guatemala	Institutions state they are offering Norplant	Observation or service statistics	Annual	0	2 institutions offer Norplant	IGSS & APROFAM offer method
	EC services are available	Institutions state they are offering EC	Observation or service statistics	Annual	0	Forensic doctors of the public ministry and justice system offer EC services	Baseline survey completed; 50 forensic doctors and 50 workers of justice system trained on EC

3. APROFAM promoters make home visits for new users	APROFAM reports home visits by promoters	Number of home visits conducted by promoters	Rural Development Program service statistics	Annual	1999 baseline and 2000 endline	Study completed	Study completed
4. Expanded provision of NFP instruction	Health agencies provide instruction in necklace NFP method	Institutions state they provide the method or send user reports	NGO and APROVIME reports	Annual	5 NGOs trained: 1999	At least 10 NGOS trained by end of 2000	40 NGOs trained
5. Make reproductive health information available to rural families	School-based sex education developed and tested	Primary and secondary schools provide sex education courses	PC surveys and training reports	Before-after intervention assessment	0	10 primary and secondary schools provide sex education courses	10 primary and secondary schools provided sex education courses
6. Strategies tested for improved RH care provider performance	New training model(s) demonstrated	RH care personnel trained through Distance Learning (DL) strategy	Council surveys and training reports	At mid-2001	NA	30 doctors and 30 nurses complete DL course	20 Departmental MOH doctors and 20 nurses, 4 Central MOH doctors, 2 University of San Carlos (USAC) doctors, 2 IGSS doctors enrolled in USAC DL course

ANNEX 5:
PARTNER NGOs APPROVED, EXECUTED AND AMENDED BUDGETS: 1997 – 2001

Table 1. Summary of NGO/NGO Network Projects' Approved Budgets 1997-2001

ITEM	Renaci- miento	ASECSA	Rxiin Tnamet	El Recuerdo	CDRO	SHARE	Pies de Occidente	B'elejeb B'atz	IDEI	TOTAL
Personnel	138,485	150,554	77,349	19,481	76,387	289,020	131,355	60,391	145,669	1,088,691
Travel	71,600	24,524	10,452	2,597	2,495	46,654	5,161	9,424	16,823	189,730
Training- Materials	58,889	132,902	32,095	12,987	70,315	138,652	103,039	50,975	93,614	693,468
Monitoring & Evaluation	20,383	16,750	4,290		4,238	11,831	5,954		10,355	73,801
Equipment & Furniture	8,386	6,271		3,636	7,695	3,641		8,219	11,965	49,813
Administrative Cost	5,474	2,694	25,158	5,195	3,258	79,084	25,974	12,837	12,585	172,259
TOTAL	303,217	333,695	149,344	43,896	164,388	568,882	271,483	141,846	291,011	2,267,762

Table 2. Summary of NGO/NGO Networks Budgets Executed by September 2001

ITEM	Renacimiento	ASECSA	Rxiin Tnamet	El Recuerdo	CDRO	SHARE	Pies de Occidente	B'elejeb B'atz	IDEI	TOTAL
Personnel	134,276.62	133,176.62	71,887.78	19,379.91	77,140.17	286,500.99	124,438.88	57,988.05	139,011.10	1,043,800.12
Travel	56,635.74	26,246.24	6,555.87	2,583.98	2,957.21	45,473.77	4,889.27	8,950.36	14,334.20	168,626.64
Training-Materials	59,757.08	132,863.75	19,149.79	12,900.31	58,529.07	68,980.12	98,717.79	52,020.69	97,776.22	600,694.82
Monitoring & Evaluation	16,563.95	7,833.83	1,517.62		3,890.07	10,882.47	5,640.40		10,628.60	56,956.94
Equipment & Furniture	8,765.83	5,908.11		3,918.28	8,334.25	3,559.95		7,925.67	16,392.94	54,805.03
Administrative Cost	4,817.21	2,791.01	24,357.72	4,815.07	2,553.84	78,599.56	24,974.72	14,961.24	12,861.39	170,731.76
TOTAL	280,816.43	308,819.56	123,468.78	43,597.55	153,404.61	493,996.86	258,661.06	141,846.01	291,004.45	2,095,615.31

Table 3. Summary of NGO Target Populations Amended in 1999-2000

NGOs/NGO Networks	Infants 0-11 months	Infants 11-23 months	Children 24-59 months	Children under 5 years	Men	Women	Pregnant women	Other
Renacimiento y Red Kaqchikel				11,656		14,708		
B'elejeb' B'atz						28,996		
PIES de Occidente	5,426	8,294	11,836	12,205		36,196	6,028	4,000
IDEI	1,476	2,660	3,543		5,910	11,516	1,771	2,600
CDRO	1,702	3,714	4,402	188		14,381	978	
SHARE	1,713	1,741	5,878			12,368	2,581	
Rxiin Tnamet				7,648	9,292	9,023		
ASECSA	883	1,223	1,828	3,015	1,680	3,600	900	7,000
Coop. El Recuerdo	1,109	1,375	4,527	7,011	4,480	4,221	1,900	1,000
Total	12,259	19,007	32,014	41,723	21,362	135,009	14,158	4,000

ANNEX 6.

Table 1. Educational material distributed to NGO partners of the Population Council: 1998-2001

	Rena	Rxiin Tnamet	CDRO	SHARE	ASCESA	Beljeb Batz	IDEI	PIES	E. Recuerdo	Total
Community Guide	290	650	135	1100	1450	100	85	200	630	4640
Supervisor Guide	135	450	50	150	450	50	50	100	150	1585
Clinical Guide	40	100	50	100	100	25	25	25	25	500
Flipcharts	200	100	100	400	700	75	50	125	150	1900
FP Poster	50	50	50	200	50	50	50	50	50	600
Necklace Poster	50	25	50	150	50	50	50	90	50	565
Calendar	300	200	400	600	200	300	200	200	200	2600
Brochure	500	500	2000	5000	500	600	500	1000	500	11100
Flyers (9)	16800	12500	19200	14300	13000	5800	8500	8700	7600	106400

Table 2. Material distributed to other institutions 1998-2001

	URC	MOH	Roosevelt H.	IGSS	Other NGOs	Pro- Peten	Save the Children	Total
Community Guide	1000				125	75	420	1620
Supervisors Guide	200				125	60	120	505
Clinical Guide	400				125		10	535
Flipchart	300	200						500
FP Poster	250							250
Calendar		900						900

ANNEX 7.**Table 1. The Population Council's NGO Sub-grants**

NGOs and NGO Networks	Project Start Date	Project End Date
"Red Kachiquel" Renacimiento and 7 NGO partners	1-Sep-1997	31-Oct-2001
IDEI	1-Sep-1997	31-Oct-2001
CDRO	1-Sep-1997	31-Oct-2001
SHARE and 6 NGO partners	1-Sep-1997	31-Oct-2001
PIES de Occidente	1-Aug-1998	31-Oct-2001
ASECSA and 5 NGO partners	1-Sep-1997	31-Oct-2001
Cooperativa el Recuerdo	1-Jan-2001	31-Oct-2001
B'elejeb' B'atz	1-Oct-1998	31-Oct-2001
Rxiin Tnamet	1-Aug-1998	31-Oct-2001

Table 2. NGO and NGO Networks' Target Populations by Age Group

NGO	Children 0-11 m.	Children 11-23 m.	Children 24-59 m.	Children < 5 years	Men	Women	Pregnant Women	Others	Others
Renacimiento				5,851		9,476			
Red Kaqchikel				6,716		5,731			
B'elejeb' B'atz				7,752		18,806			
PIES de Occ.	5,426	8,295	11,863			36,196	6,028	125	
IDEI	1,476	2,660	3,543		5,910	11,516	1,771		2,660
CDRO	1,702	3,714	4,402	188		14,381	978	9,818	
SHARE	2,147	2,179	6,246		13,159	13,698	2,859	140	14,494
Rxiin Tnamet				7,648	9,292	9,023			
ASECSA	665	1,055	1,660	2,185	960	2,880	695	115	775
El Recuerdo	1,109	1,375	4,527			4,515	1,900	328	22
Total	12,525	19,278	32,241	30,340	29,321	126,222	14,231	10,526	17,951

ANNEX 8.

STANDARDIZED QUESTIONNAIRE FOR END OF PROJECT ASSESSMENT AND IMPACT EVALUATION: ELEMENT II

MODULE I: BASIC INFORMATION

Age, education, ethnicity (1,2 and 3)

MODULE II: PREGNANCY & BREAST FEEDING

4. What is (name of child) birth date?
5. Are you breast feeding (name of child)
6. Have you ever breast-fed (name of child)
7. How old was (name of child) when you breast-fed for the first time?
8. Are you feeding (name of child) pure or sugar water, formula milk, juice/tea/coffee, atole, beans, soup/broth, tortilla/tamal/bread, vegetables, egg/cheese, meat/chicken/fish?

MODULE III: CONTROL OF DIARRHEAL ILLNESSES

9. Has (name of child) had DIARRHEA in the last two weeks?
10. When (name of child) had DIARRHEA, did you have him DRINK the SAME amount of liquids, MORE liquids, or FEWER liquids?
11. When (name of child) had DIARRHEA, did you feed him/her the SAME amount of food, MORE food, or LESS food?
12. Did you seek treatment or advice for their DIARRHEA?
13. Where did you receive help?
14. What treatment was given to the child or did you give the child?
15. When a child is sick with DIARRHEA, what do you think are the danger signs that indicate that the child should be taken to the doctor?

MODULE IV: CONTROL OF PNEUMONIA

16. In the last two weeks, has (name of child) had a respiratory illness with rapid breathing, or difficulty breathing as if they were suffocating?
17. When (name of child) was ill, did you take him somewhere or to someone who could help him/her?
18. Where did you take the child for help?
19. When you sought help for your child:
 - a. Did they give you a briefing while you were waiting?
 - b. Did the person attending to your child treat you with respect?
 - c. Did they explain the child's illness to you?
 - d. Did they prescribe medication?
 - e. Did they explain to you what you should do?
 - f. Did they show you any visual materials?
 - g. Did they ask you to return?
 - h. In case of another illness, would you return to the same place?
 - i. Would you recommend this place (or person) to a relative or friend?
20. When a child is sick with pneumonia, what do you think are the signs that indicate that the child needs to be taken to a doctor?

MODULE V: VACCINES

21. Has (name of child) ever received any vaccines?
22. At what age should a child be given a measles vaccine?
23. Do you have an immunization card for (name of child)?

24. Observe the vaccination card and record the dates for BCG, first dose of opv, second dose of opv, third dose of opv, opv booster, first dose of DPT, second dose of DPT, third dose of DPT, DPT booster and measles.

MODULE VI: ILLNESSES

25. Have you had a **SERIOUS** illness in the last six months?
26. What type of illness was it?
27. When you were ill, did you go somewhere or to see someone for help?
28. Where did you go for help?
29. How were you treated?
- a. Did they give you a briefing while you were waiting?
 - b. Did the person assisting you treat you with respect?
 - c. Did they explain your illness to you?
 - d. Did they explain to you what you should do?
 - e. Did they show you any visual materials?
 - f. Did they ask you to return?
 - g. In case of another illness, would you return to the same place?
 - h. Would you recommend this place (or person) to a relative or friend?
30. Do you know of any organizations or groups that work in health or help to resolve problems in your community?
31. Do you participate in any of these organizations or community groups?
32. Would you like to participate in a group designed to seek ways to resolve problems in your community?
33. What are the difficulties that women face in participating in activities to improve their communities?

MODULE VII: PREGNANCY & DELIVERY

34. When you were pregnant with (name of child), did you attend your prenatal exams?
35. How many did you attend?
36. When you were pregnant with (name of child), did you receive any vaccines? How many?
37. When (name of child) was born, who tied and cut the umbilical cord?
38. When (name of child) was born, did you have any complications before, during or after the child's birth?
39. Did you need any help or assistance when you experienced problems?
40. Where did you receive help?

MODULE VIII: FAMILY PLANNING

41. In general, do you agree that couples should use some type of birth spacing method?
42. Do you think that any of the methods that I'm going to list (read) are bad for your health?
43. With respect to menstruation, when in her cycle is a woman most likely to get pregnant?
44. Are you pregnant?

45. Would you like to have another child within the next few years?
46. If you would like to have another child, do you think becoming pregnant will be EASY, NORMAL, OR VERY DIFFICULT?
47. Are you using any methods to space your pregnancies or to delay the next pregnancy?
48. Have you ever used any method to space or delay your pregnancies?
49. Which methods have you used?
50. Who introduced you to these methods?
51. Please tell me about the counseling you received.
52. Who made the decision to use the method?
53. Do you discuss your family and the number of children you would like to have with your husband?
54. With whom would you like to discuss pregnancy spacing methods?
55. If a couple in this town wanted to use pills to space pregnancies, where could they get them?
56. If a couple in this town wanted to use condoms (these little rubber bags) to avoid a pregnancy, where could they get them?
57. If a couple in this town wanted to use a shot (Depo-Provera) to space their pregnancies, where could they get one?

MODULE IX: FEMALE ILLNESSES

58. Do you know anyone who has or has had uterine cancer?
59. Have you ever heard of a PAP test to detect uterine cancer before it become serious?
60. Have you ever had a PAP test?

MODULE X: IEC

61. Do you know any community health promoter or guardian in this community?
62. Has any health worker visited your home in the last three months?
63. What type of health worker has visited?
64. What did the health worker discuss with you?
65. Have you heard any health radio message in the last three months?
66. What did the radio message talk about?
67. Have you attended any community seminars or talks about health in the last three months?
68. What was the talk about?
69. Have you received any printed material about health in the last three months?
70. What was the material discussing?

ANNEX 9: RESULTS, INDICATORS AND BENCHMARKS FOR ELEMENT II: NGO STRENGTHENING PROJECT, 1994- 2001

I. Results, Benchmarks and Indicators for Element II: NGO Strengthening Projects 1994-2001

Key Monitoring and Evaluation Indicators

Key monitoring indicators are reported through three main sources of information: NGOs' health information system, NGOs' logistic information system, and baseline/end-of-project evaluations. Table 15 displays proposed targets for the monitoring indicators and the actual percentage increases achieved through the project for these indicators (last two right-hand columns).

Table 1. Summary conclusion of Intermediate Results 1: *Increased used of Quality Maternal and Child Health Services Among Rural Families*

Findings based on Performance Indicators:

1.= *Better Household Health Practices*

2.= *Community Health Agents (Volunteer Health Workers & Traditional Birth Attendants) Provide Quality Care*

Performance Indicators		Definition and Unit of Measurement	Data Source and Collection Method	Indicators		
				Life-of-Project Proposed Targets	Baseline Results	End-of-Project Results
1. Improved nutritional practices	Increased exclusive breastfeeding practices	Children under six months of age exclusively breastfed	Cross-sectional study	50%	48.8%	51.6%
	Increased timely and appropriate weaning practices	Children 6-10 months of age who are weaned and receiving complementary foods		70%	78.6%	80.3%
	Increased continuation of breastfeeding	Children who continue breastfeeding between 20-24 months of age		75%	70.9%	67.3%
2.NGOs providing quality integrated child care	NGOs providing IMCI services	NGOs clinical health workers applying IMCI	NGOs health information systems (HIS)	20 NGOs	None	24 NGOs

Performance Indicators		Definition and Unit of Measurement	Data Source and Collection Method	Indicators		
				Life-of-Project Proposed Targets	Baseline Results	End-of-Project Results
		NGO community-based health workers applying IMCI	NGOs HIS	Based on the OR results and if proven to be effective, 3 NGOs will be implementing the IMCI-C	None	24 NGOs
	ORS services available	NGOs distributing ORS packages at clinic and community levels	NGOs HIS	20 NGOs	20 NGOs	30 NGOs
	Basic IMCI services available	NGOs with clinical services, have antibiotics in stock for pneumonia case management	NGOs HIS	20 NGOs will have IMCI antibiotics and supplies	20 NGOs	24 NGOs
		NGOs correctly using IMCI protocols and materials		20 NGOs employing IMCI protocols correctly	None	24 NGOs
	Increased demand for health services for children with acute respiratory infections (ARIs)	Mothers/caretakers whose children had signs of pneumonia and sought help from a trained health worker	Cross-sectional study	70%	62.0%	74.9%

Performance Indicators		Definition and Unit of Measurement	Data Source and Collection Method	Indicators		
				Life-of-Project Proposed Targets	Baseline Results	End-of-Project Results
	NGOs support EPI: Increase EPI knowledge	Mothers/care takers who know the immunization schedule	Cross-sectional study	NA*	29.2%	29.0%
3. Increase access to quality care during pregnancy, delivery and post-partum	NGOs providing quality care during pregnancy, delivery and post-partum	Women who had prenatal exams	Cross-sectional study	NA*	69.6%	83.1%
		Births & newborns attended by trained health worker	Cross-sectional study	NA*	10.1%	14.5%
4. Increase access to family planning services	Increase knowledge of fertile cycle	Women who know the fertile period in a woman's cycle	Cross-sectional study	NA*	8.1%	14.5%
	Increase FP service delivery points	Total NGOs offering FP methods	NGOs HIS	20 NGOs		24 NGOs
	Increase number of family planning users	Total distribution of FP methods	NGOs HIS	Condoms 46,202	None	Condoms: 54,224

Performance Indicators		Definition and Unit of Measurement	Data Source and Collection Method	Indicators		
				Life-of-Project Proposed Targets	Baseline Results	End-of-Project Results
				Vaginal Tablets 1,910	None	Vaginal Tablets: 3,509
				Oral Pills 5,229	None	Oral Pills: 10,831
				Depo-Provera 9,214	None	Depo-Provera: 13,411
		Natural FP users		NFP (LAM and Necklace) 2,742	None	NFP (LAM and Necklace): 2,742
		New PF users	NGOs HIS	3,000	None	2,898

* Note. PC had not set targets in these areas at the beginning of the project because most NGO health services did not provide these type of services, but it is used as a key indicator given its importance.

Table 12. Summary conclusion of Intermediate Result 2: Maternal child health programs are well managed

Findings based on Performance Indicators:

3. = *Supplies and equipment are continuously available*

4. = *High quality financial and administrative data support decision-making*

5. = *Program planning and evaluation based on quality data*

Performance Indicators		Definition and unit of measurement	Data source and collection method	Indicators		
				LOP Expected results	Baseline Results	End-of-Project Results
4. FP methods and basic medicines available	Improvements in NGOs storing and logistic system	FP methods are continuously available	NGOs HIS	20 NGOs	None NGO partners had established a logistic system for FP methods	24 NGOs
		NGOs using SIAL to manage FP methods		8 NGOs	None	22 NGOs
5. NGOs plan, schedule & report activities		Percent of NGOs with organization manuals and procedures in place	NGOs HIS	8 NGO partners and 6 NGO “umbrella” members have organizational manuals	2 NGO partners have an organizational manual; 20% of the NGO partners use computerized financial system	9 NGO partners and 3 NGO umbrella members have organizational manuals

		NGOs using computerized accounting systems		8 NGOs	2 NGOs	14 NGOs
6. NGOs monitor and evaluate activities	Improve NGOs monitoring and evaluation systems	NGOs institutionalized monitoring and evaluation instruments for decision making, planning and reporting	NGOs HIS	8 NGO partners and 6 NGO umbrella members monitor their programs	2 of NGO the partners monitor their programs	9 NGO partners and 3 NGO umbrella members monitor their programs